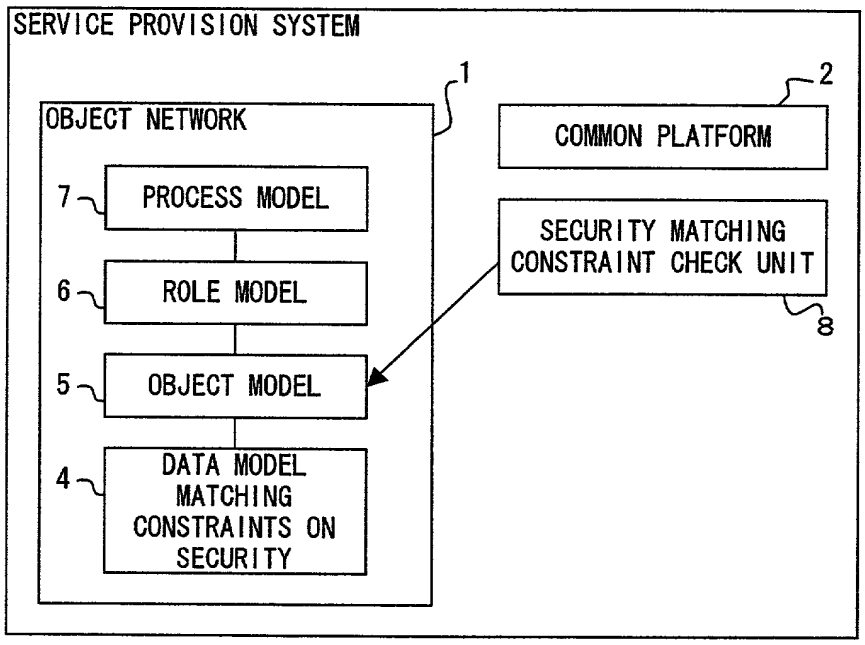

SERVICE PROVISION SYSTEM
1
2
OBJECT NETWORK
COMMON PLATFORM
7
PROCESS MODEL
SECURITY MATCHING CONSTRAINT CHECK UNIT
6
ROLE MODEL
8
5
OBJECT MODEL
4
DATA MODEL MATCHING CONSTRAINTS ON SECURITY

FIG. 1

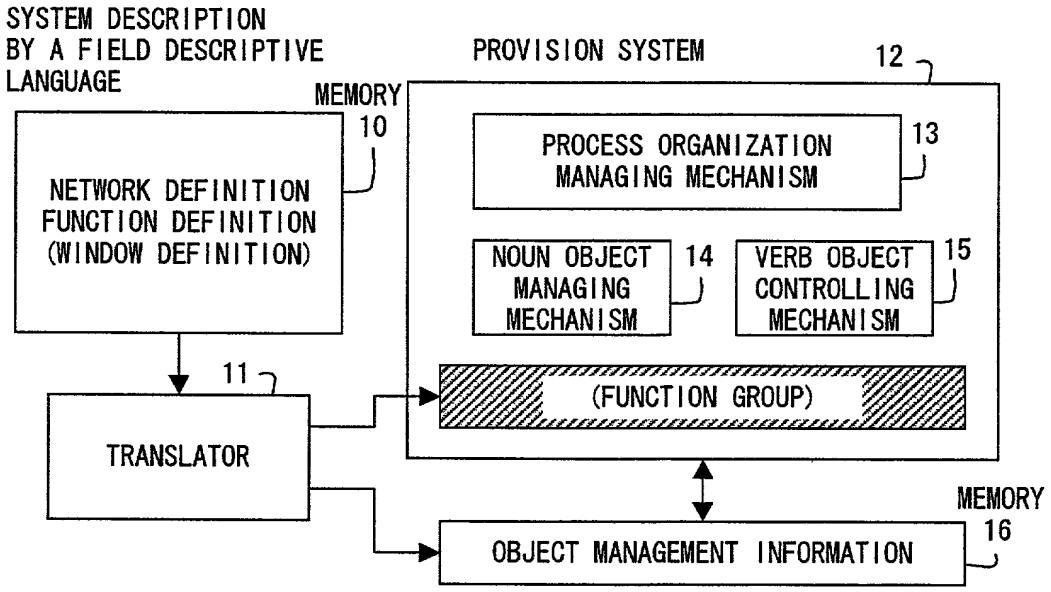
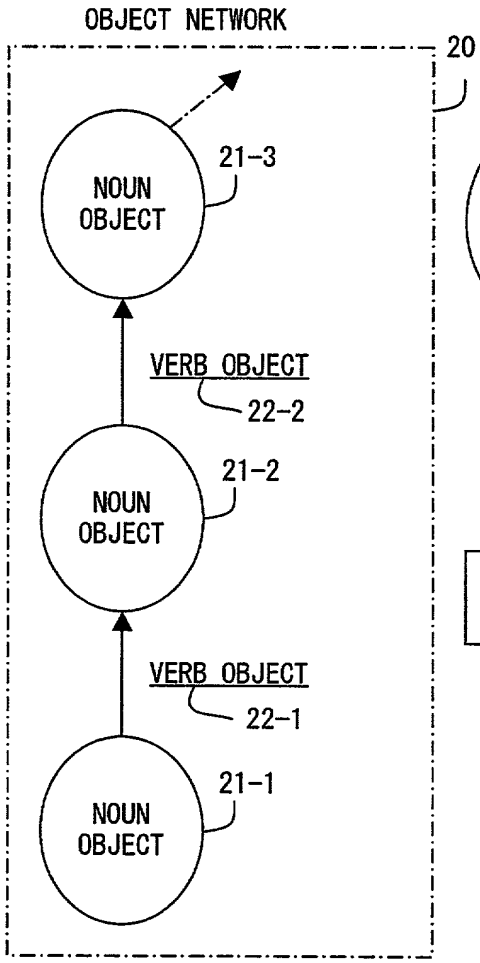
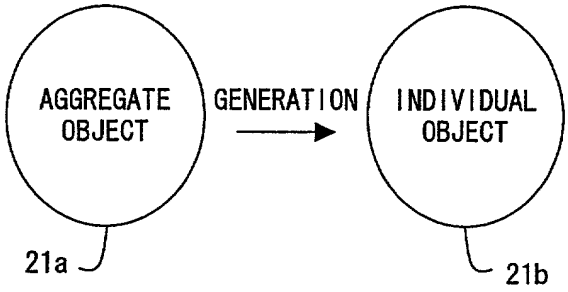

SYSTEM DESCRIPTION
BY A FIELD DESCRIPTIVE
LANGUAGE
MEMORY
10
NETWORK DEFINITION
FUNCTION DEFINITION
(WINDOW DEFINITION)
11
TRANSLATOR
PROVISION SYSTEM
12
PROCESS ORGANIZATION
MANAGING MECHANISM
13
NOUN OBJECT
MANAGING
MECHANISM
14
VERB OBJECT
CONTROLLING
MECHANISM
15
(FUNCTION GROUP)
MEMORY
16
OBJECT MANAGEMENT INFORMATION

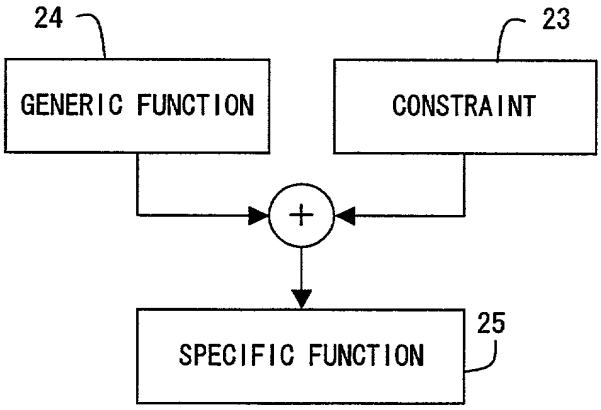
FIG. 2



F I G. 3 A



F I G. 3 B



F I G. 3 C

Patent Application Publication

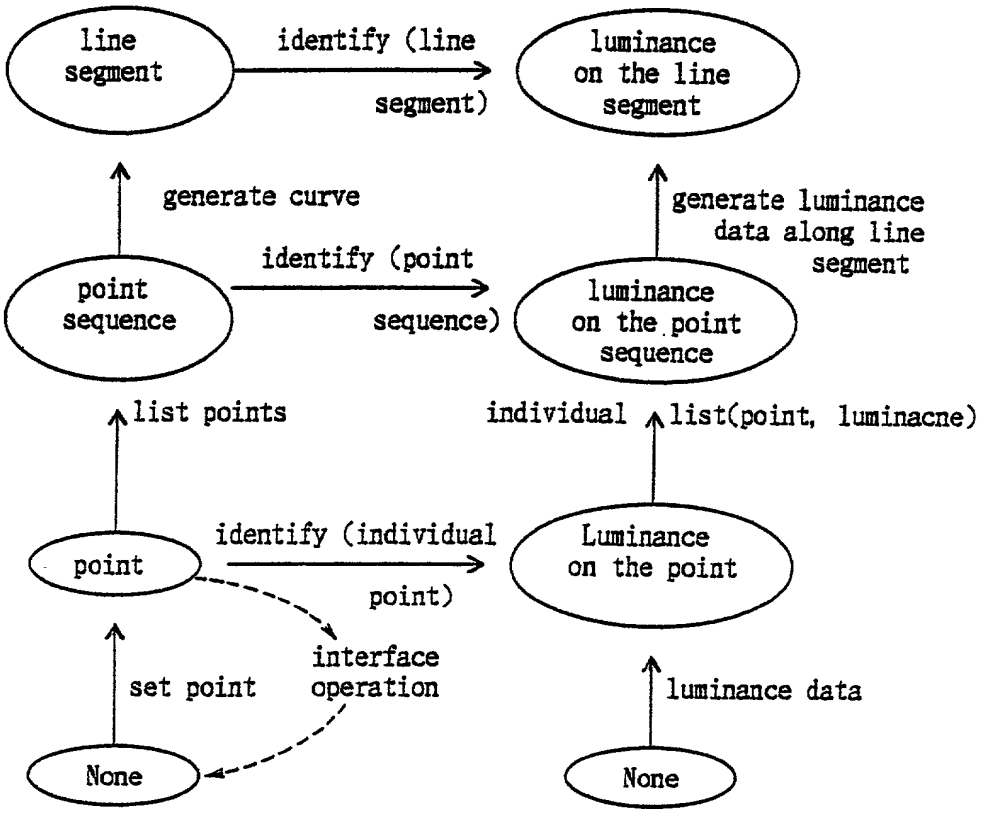


FIG. 4A

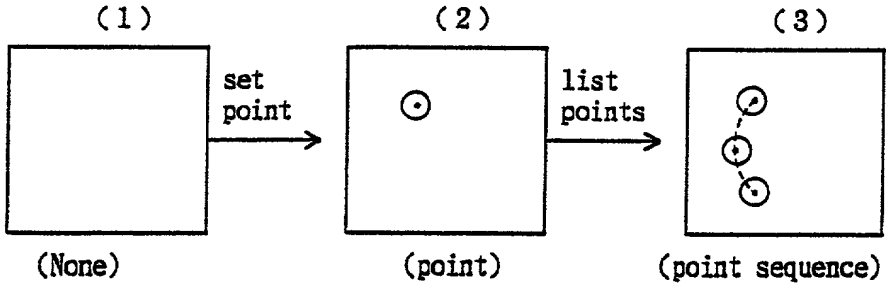


FIG. 4B

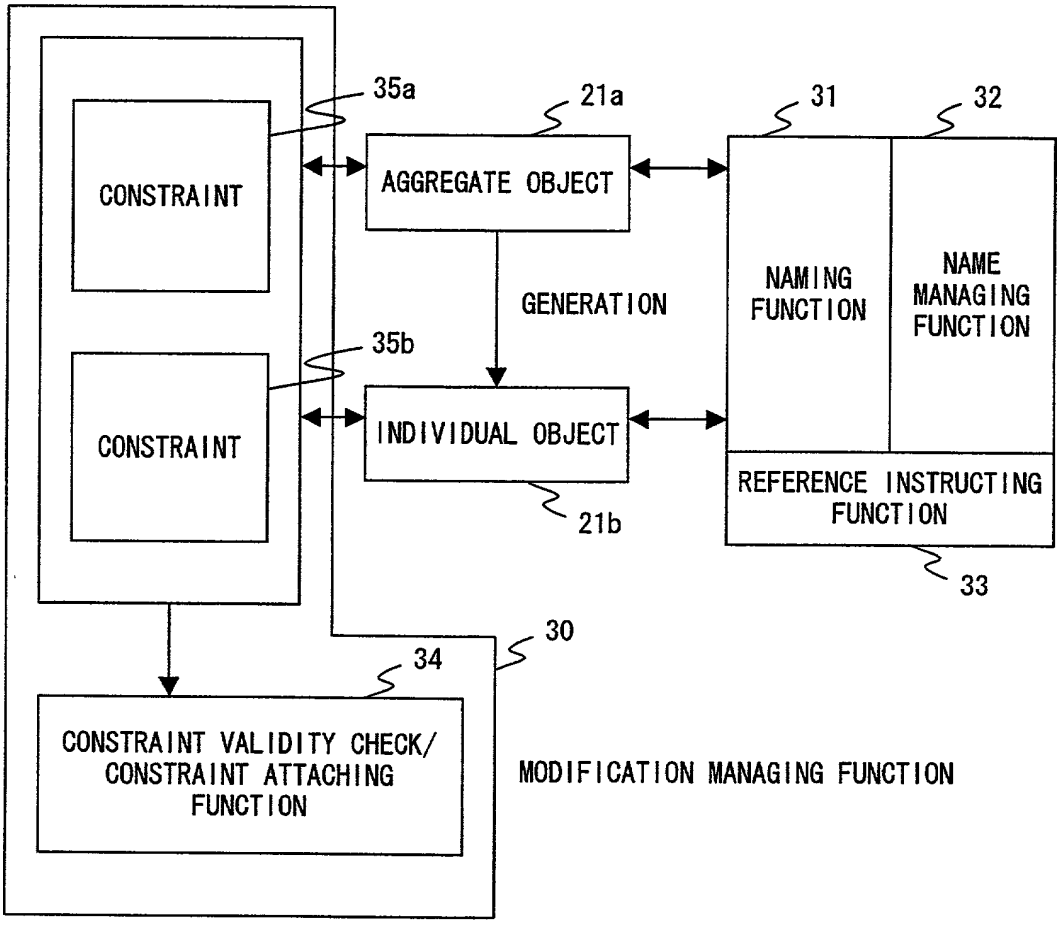
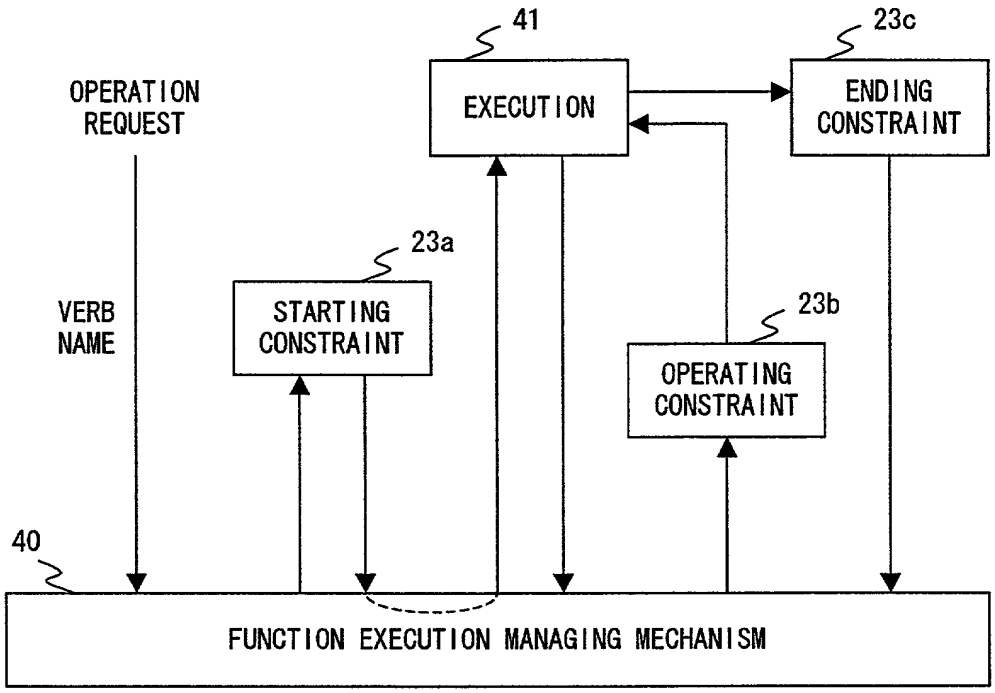

CONSTRAINT
CONSTRAINT
35a
35b
21a
AGGREGATE OBJECT
GENERATION
INDIVIDUAL OBJECT
21b
31
32
NAMING FUNCTION
NAME MANAGING FUNCTION
REFERENCE INSTRUCTING FUNCTION
33
30
34
CONSTRAINT VALIDITY CHECK/ CONSTRAINT ATTACHING FUNCTION
MODIFICATION MANAGING FUNCTION

FIG. 5


41
23c
OPERATION REQUEST
EXECUTION
ENDING CONSTRAINT
23a
VERB NAME
STARTING CONSTRAINT
23b
OPERATING CONSTRAINT
40
FUNCTION EXECUTION MANAGING MECHANISM

F I G. 6

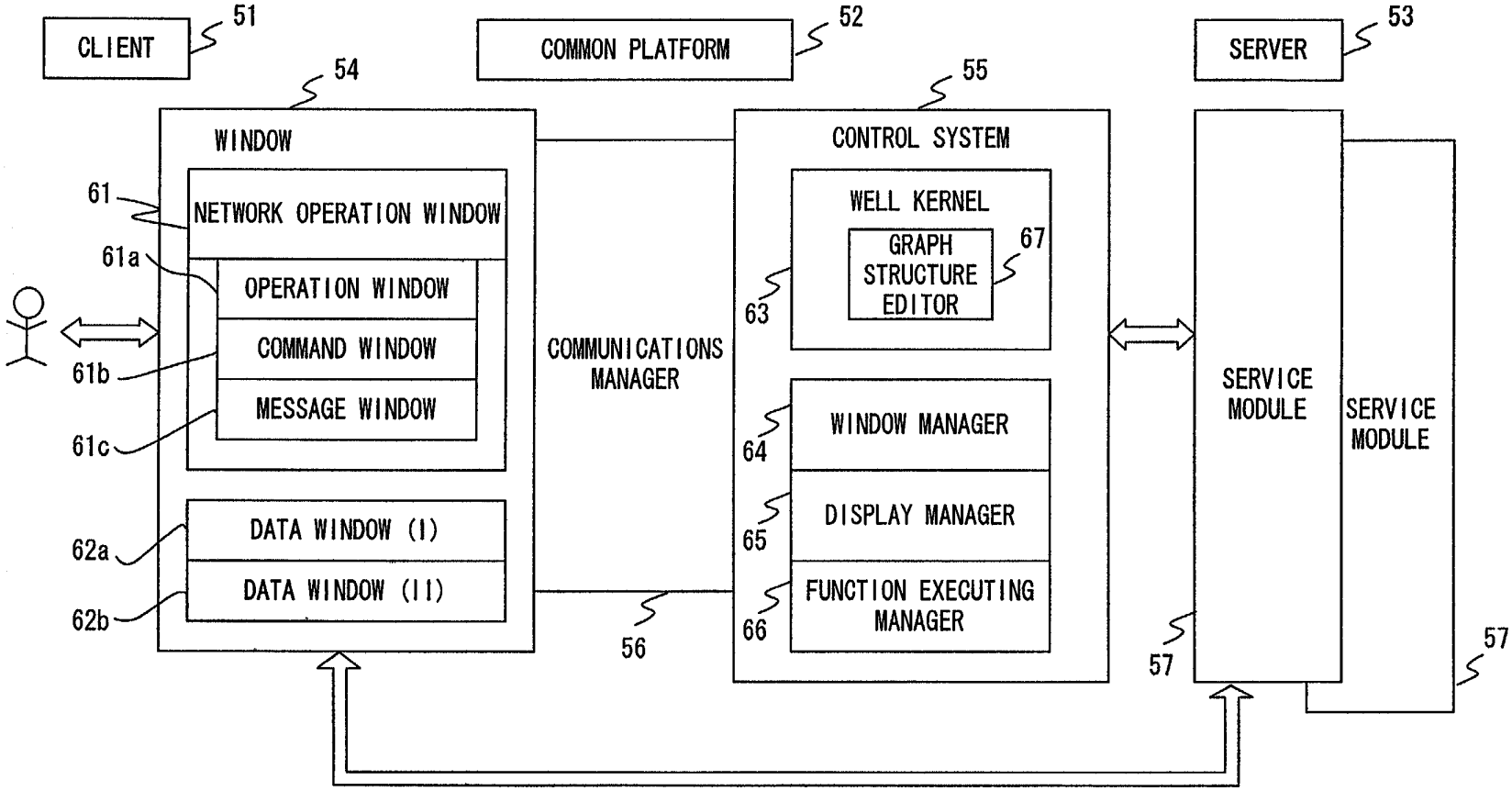

CLIENT
51
COMMON PLATFORM
52
SERVER
53
54
WINDOW
55
CONTROL SYSTEM
61
NETWORK OPERATION WINDOW
61a
OPERATION WINDOW
COMMAND WINDOW
MESSAGE WINDOW
61b
61c
WELL KERNEL
GRAPH STRUCTURE EDITOR
67
63
COMMUNICATIONS MANAGER
WINDOW MANAGER
64
DISPLAY MANAGER
65
FUNCTION EXECUTING MANAGER
66
SERVICE MODULE
SERVICE MODULE
DATA WINDOW (I)
DATA WINDOW (II)
62a
62b
56
57
57

FIG. 7

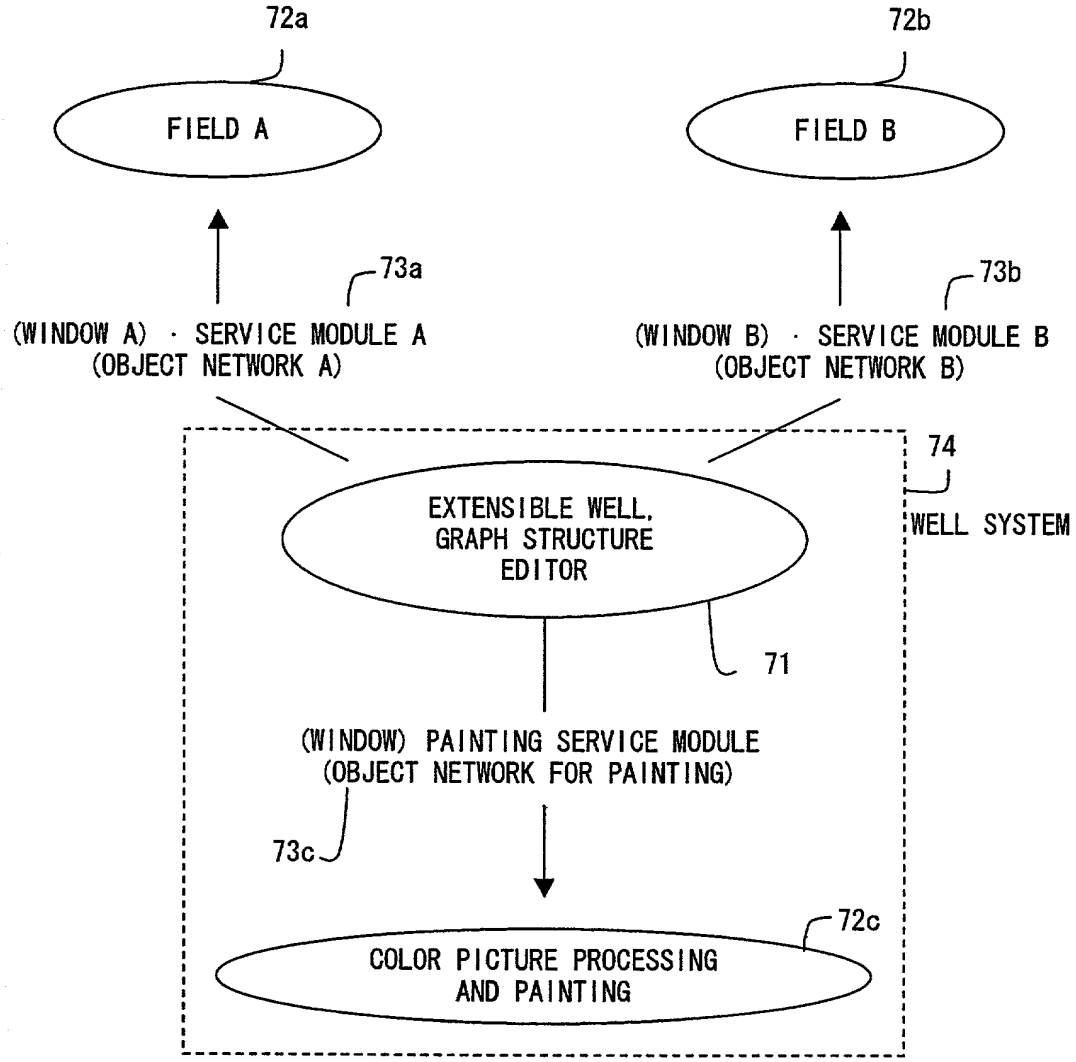

72a
72b
FIELD A
FIELD B
73a
73b
(WINDOW A) · SERVICE MODULE A
(OBJECT NETWORK A)
(WINDOW B) · SERVICE MODULE B
(OBJECT NETWORK B)
74
EXTENSIBLE WELL, GRAPH STRUCTURE EDITOR
WELL SYSTEM
71
(WINDOW) PAINTING SERVICE MODULE
(OBJECT NETWORK FOR PAINTING)
73c
72c
COLOR PICTURE PROCESSING AND PAINTING

FIG. 8

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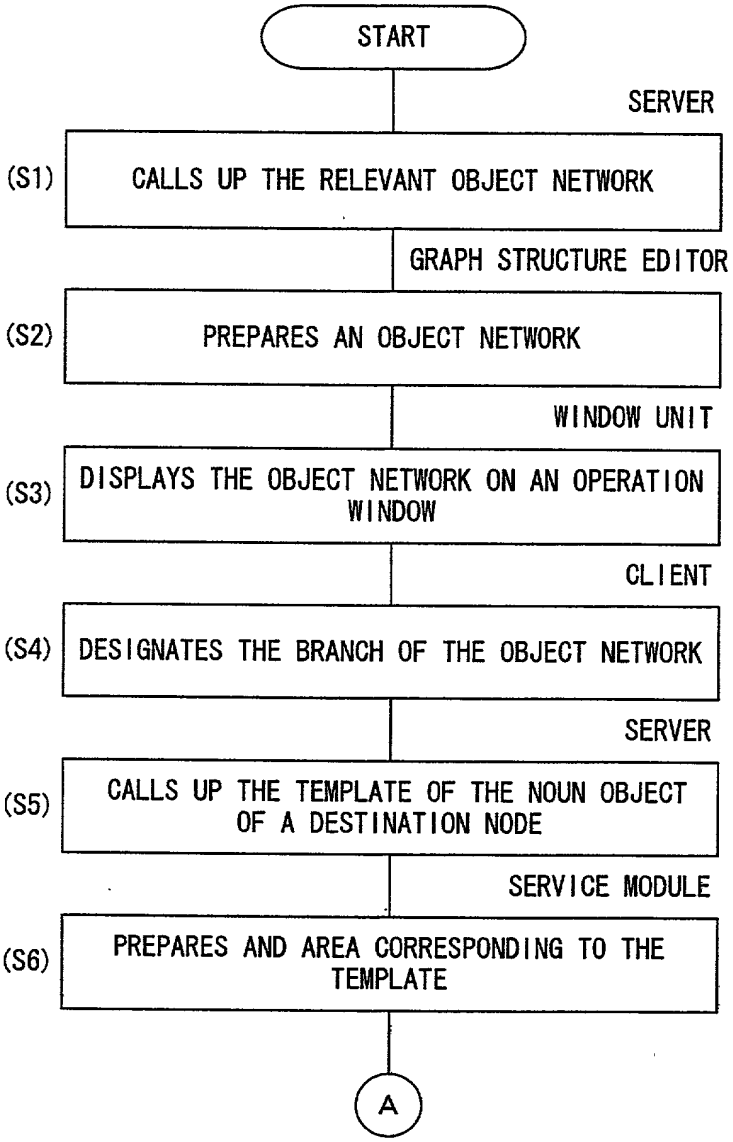


FIG. 9

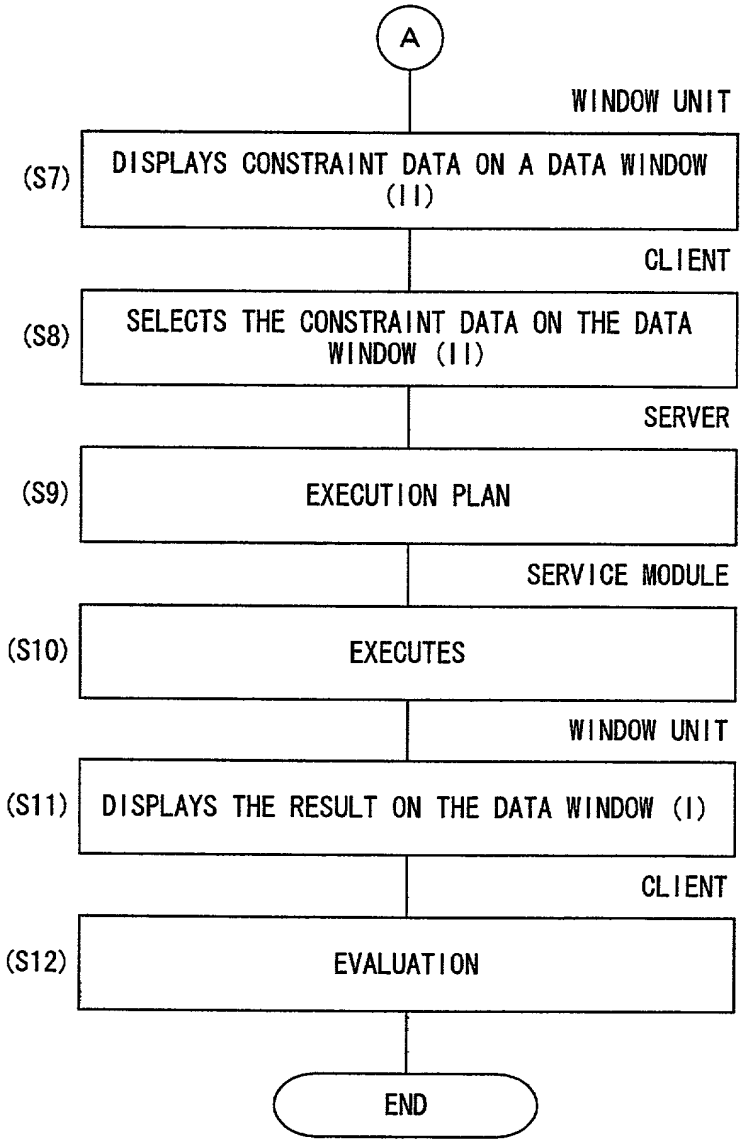

A
WINDOW UNIT
(S7)
DISPLAYS CONSTRAINT DATA ON A DATA WINDOW (II)
CLIENT
(S8)
SELECTS THE CONSTRAINT DATA ON THE DATA WINDOW (II)
SERVER
(S9)
EXECUTION PLAN
SERVICE MODULE
(S10)
EXECUTES
WINDOW UNIT
(S11)
DISPLAYS THE RESULT ON THE DATA WINDOW (I)
CLIENT
(S12)
EVALUATION
END

FIG. 10

EP 2 575 094 A1

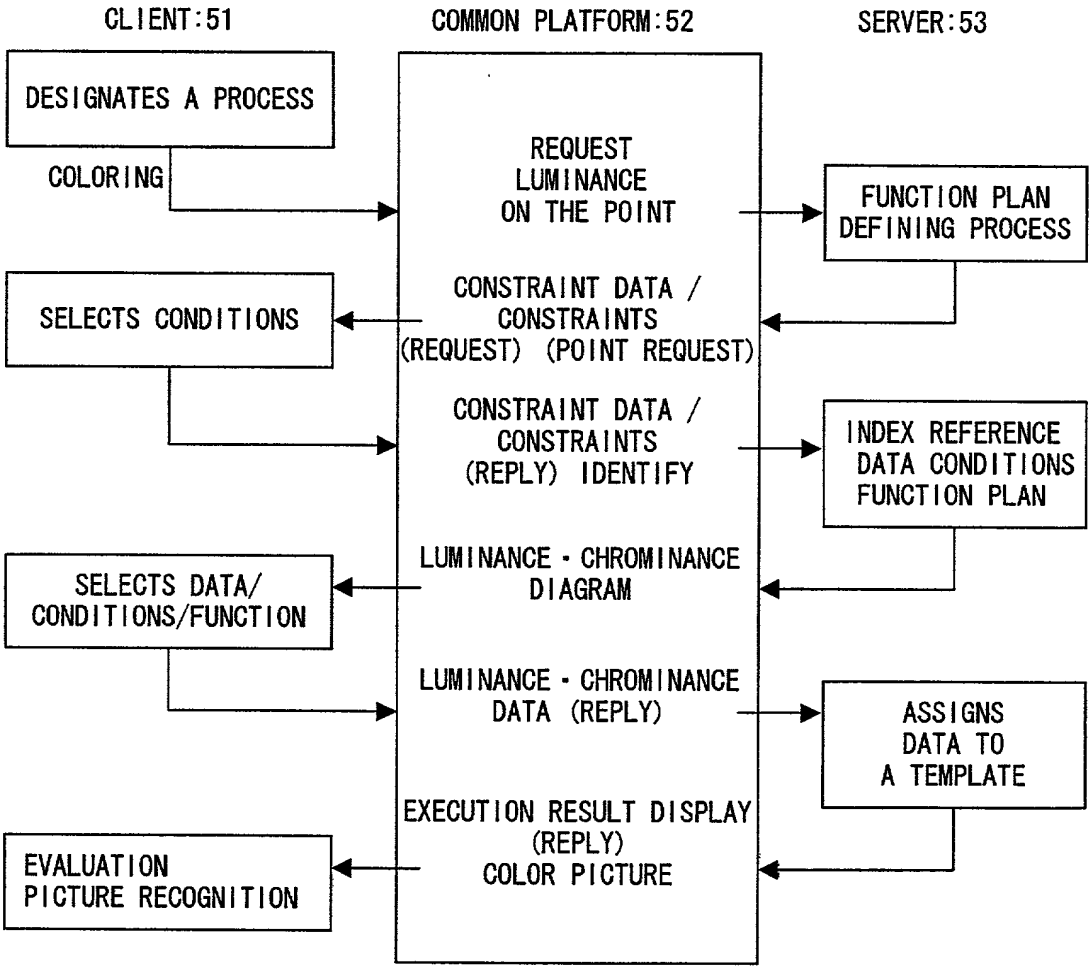


FIG. 11

index	X	Y	attributes for Point(X, Y)

FIG. 12

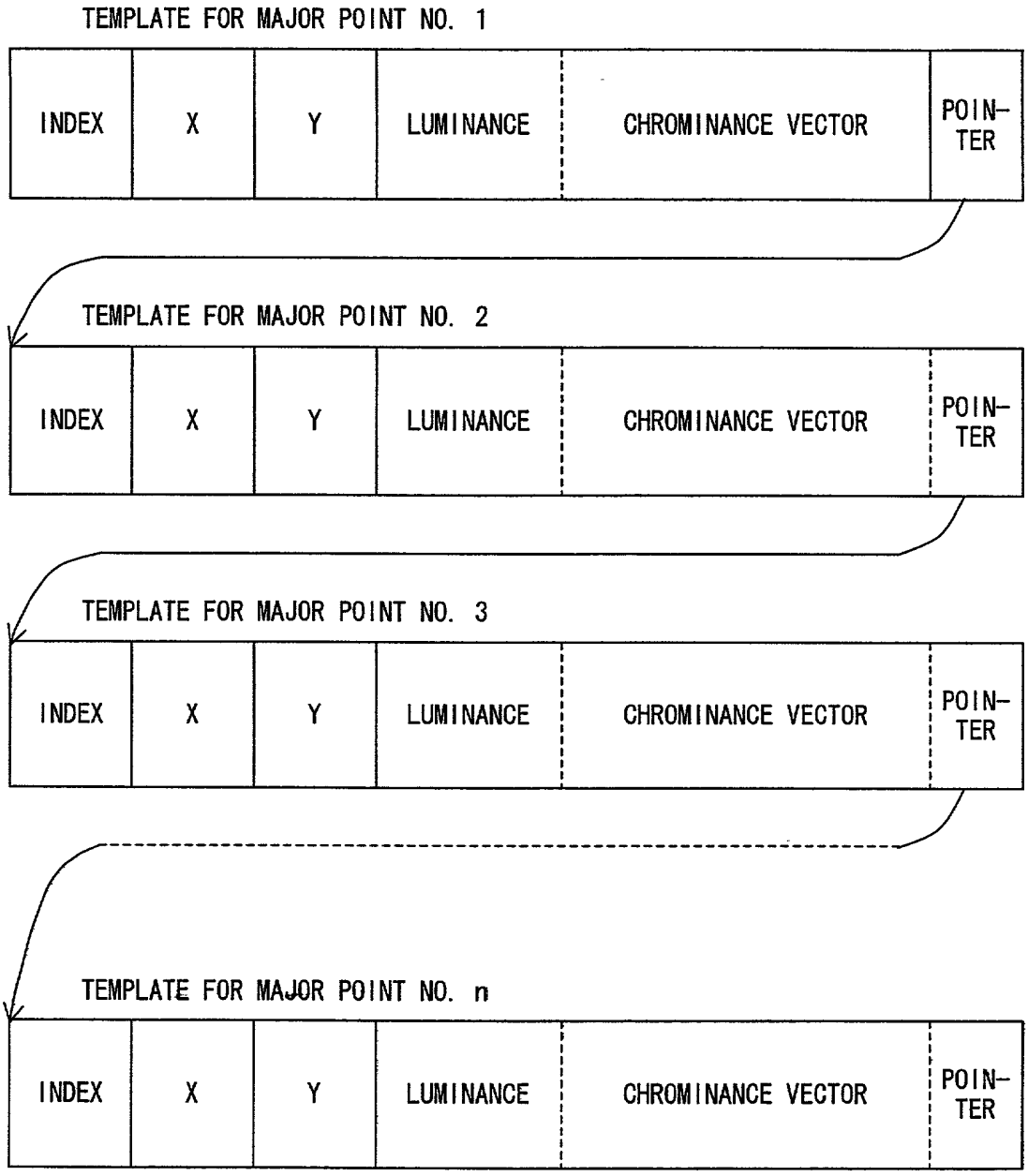
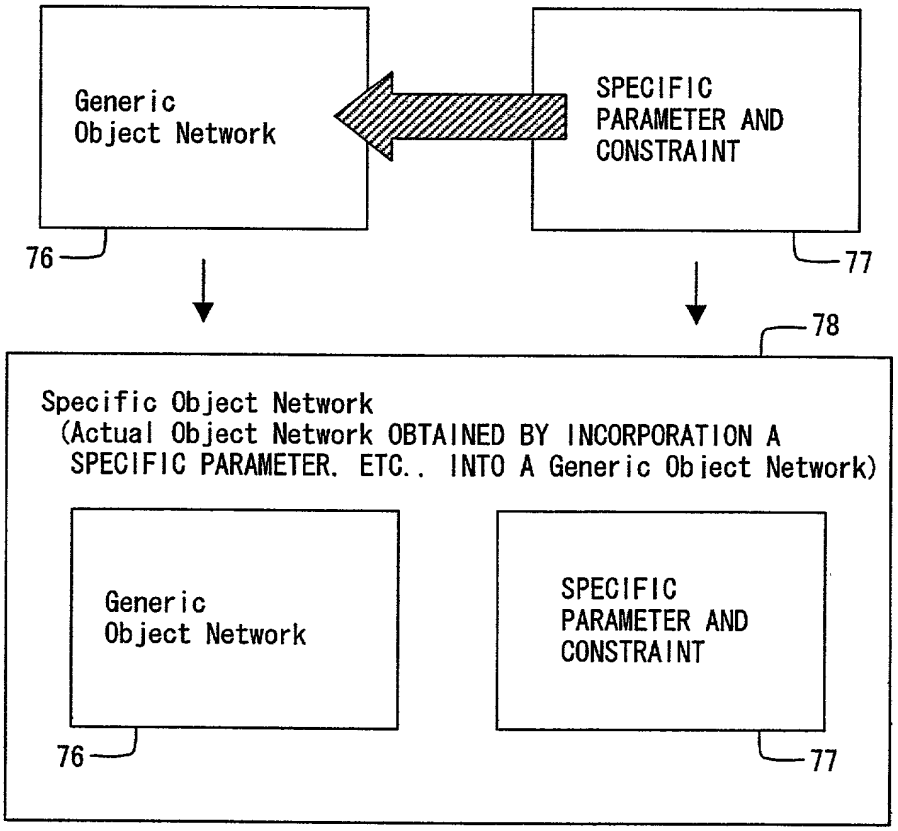

TEMPLATE FOR MAJOR POINT NO. 1
INDEX
X
Y
LUMINANCE
CHROMINANCE VECTOR
POIN-TER
TEMPLATE FOR MAJOR POINT NO. 2
INDEX
X
Y
LUMINANCE
CHROMINANCE VECTOR
POIN-TER
TEMPLATE FOR MAJOR POINT NO. 3
INDEX
X
Y
LUMINANCE
CHROMINANCE VECTOR
POIN-TER
TEMPLATE FOR MAJOR POINT NO. n
INDEX
X
Y
LUMINANCE
CHROMINANCE VECTOR
POIN-TER

FIG. 13


Generic
Object Network
SPECIFIC
PARAMETER AND
CONSTRAINT
76
77
78
Specific Object Network
(Actual Object Network OBTAINED BY INCORPORATION A
SPECIFIC PARAMETER. ETC.. INTO A Generic Object Network)
Generic
Object Network
SPECIFIC
PARAMETER AND
CONSTRAINT
76
77

F I G. 1 4

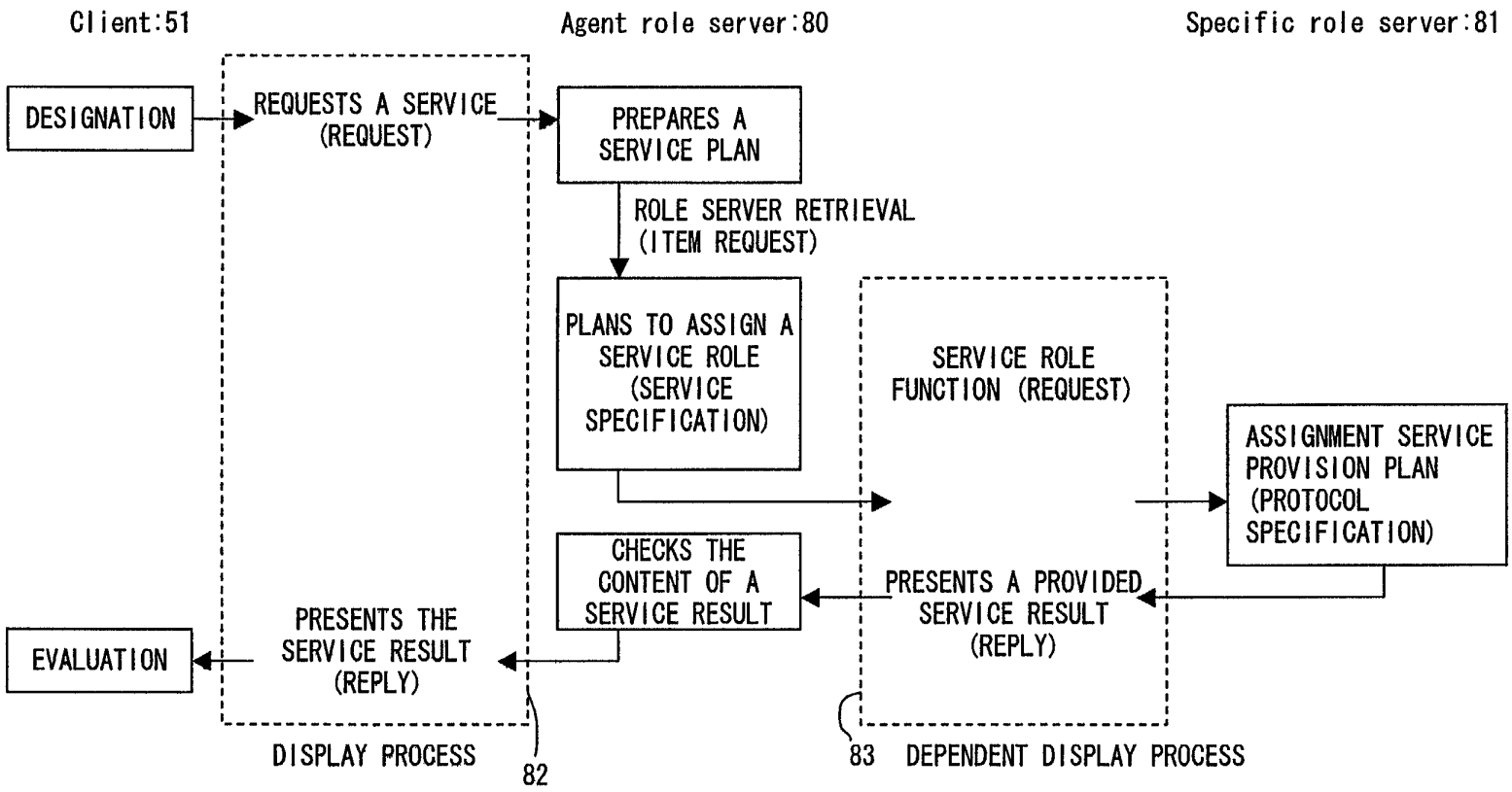

Client:51
Agent role server:80
Specific role server:81
DESIGNATION
REQUESTS A SERVICE (REQUEST)
PREPARES A SERVICE PLAN
ROLE SERVER RETRIEVAL (ITEM REQUEST)
PLANS TO ASSIGN A SERVICE ROLE (SERVICE SPECIFICATION)
SERVICE ROLE FUNCTION (REQUEST)
ASSIGNMENT SERVICE PROVISION PLAN (PROTOCOL SPECIFICATION)
CHECKS THE CONTENT OF A SERVICE RESULT
PRESENTS A PROVIDED SERVICE RESULT (REPLY)
EVALUATION
PRESENTS THE SERVICE RESULT (REPLY)
DISPLAY PROCESS
82
83
DEPENDENT DISPLAY PROCESS

FIG. 15

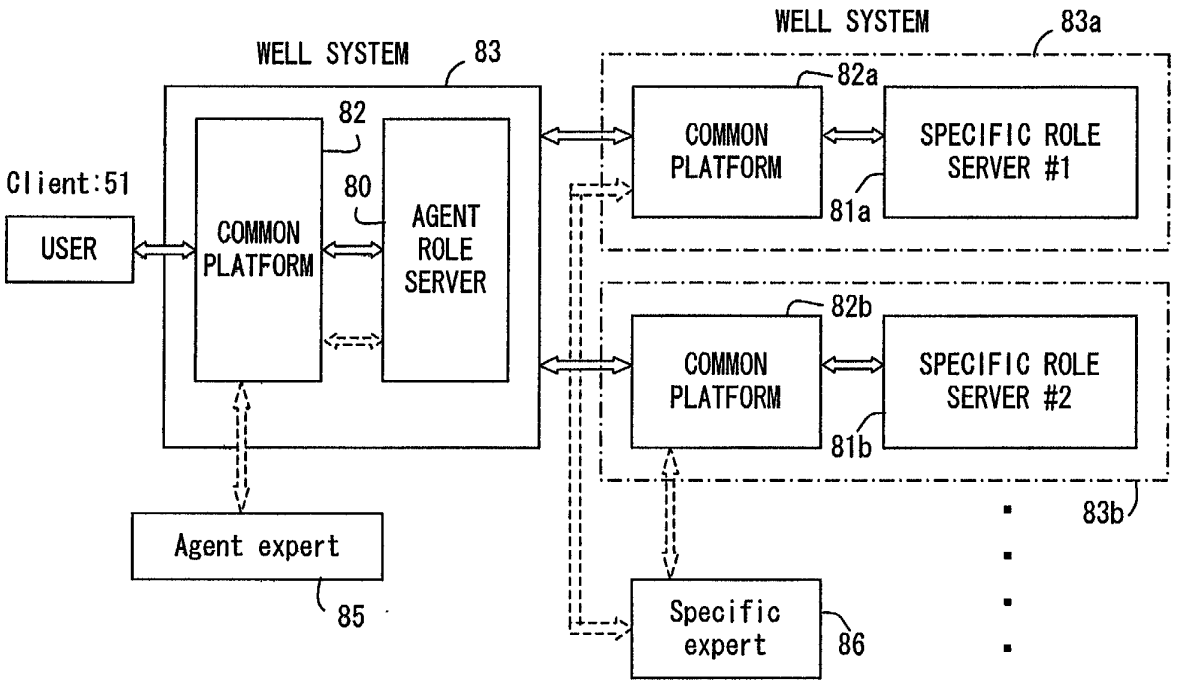

WELL SYSTEM
83
82
80
Client:51
USER
COMMON PLATFORM
AGENT ROLE SERVER
Agent expert
85
WELL SYSTEM
83a
82a
COMMON PLATFORM
SPECIFIC ROLE SERVER #1
81a
82b
COMMON PLATFORM
SPECIFIC ROLE SERVER #2
81b
83b
Specific expert
86

FIG. 16

JP2005-050350

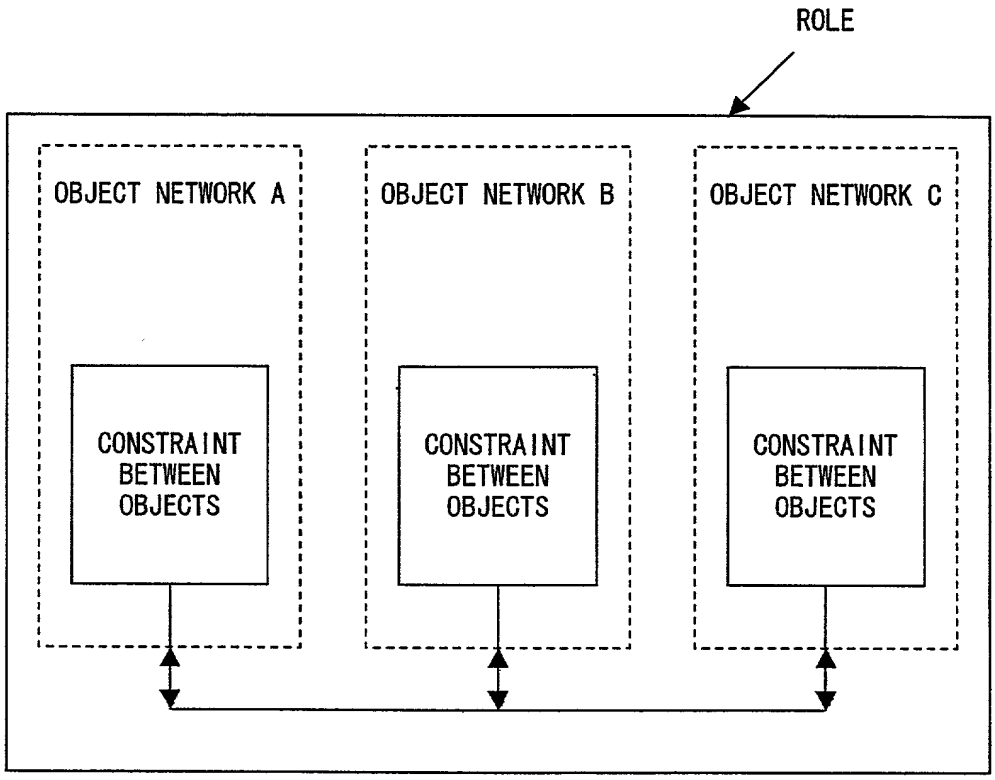


FIG. 17

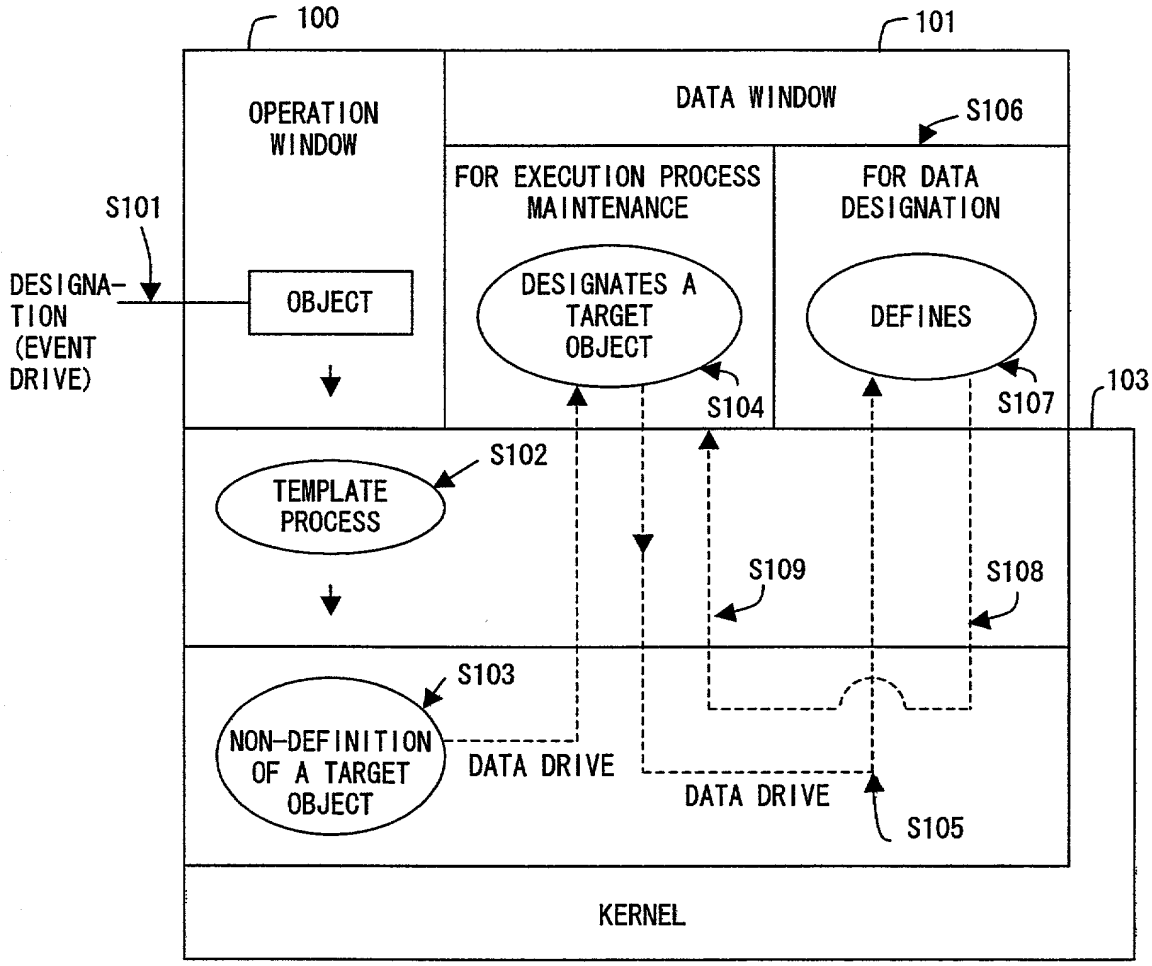

100
101
OPERATION WINDOW
DATA WINDOW
S106
FOR EXECUTION PROCESS MAINTENANCE
FOR DATA DESIGNATION
S101
DESIGNA-TION (EVENT DRIVE)
OBJECT
DESIGNATES A TARGET OBJECT
DEFINES
S104
S107
103
S102
TEMPLATE PROCESS
S109
S108
S103
NON-DEFINITION OF A TARGET OBJECT
DATA DRIVE
DATA DRIVE
S105
KERNEL

FIG. 18

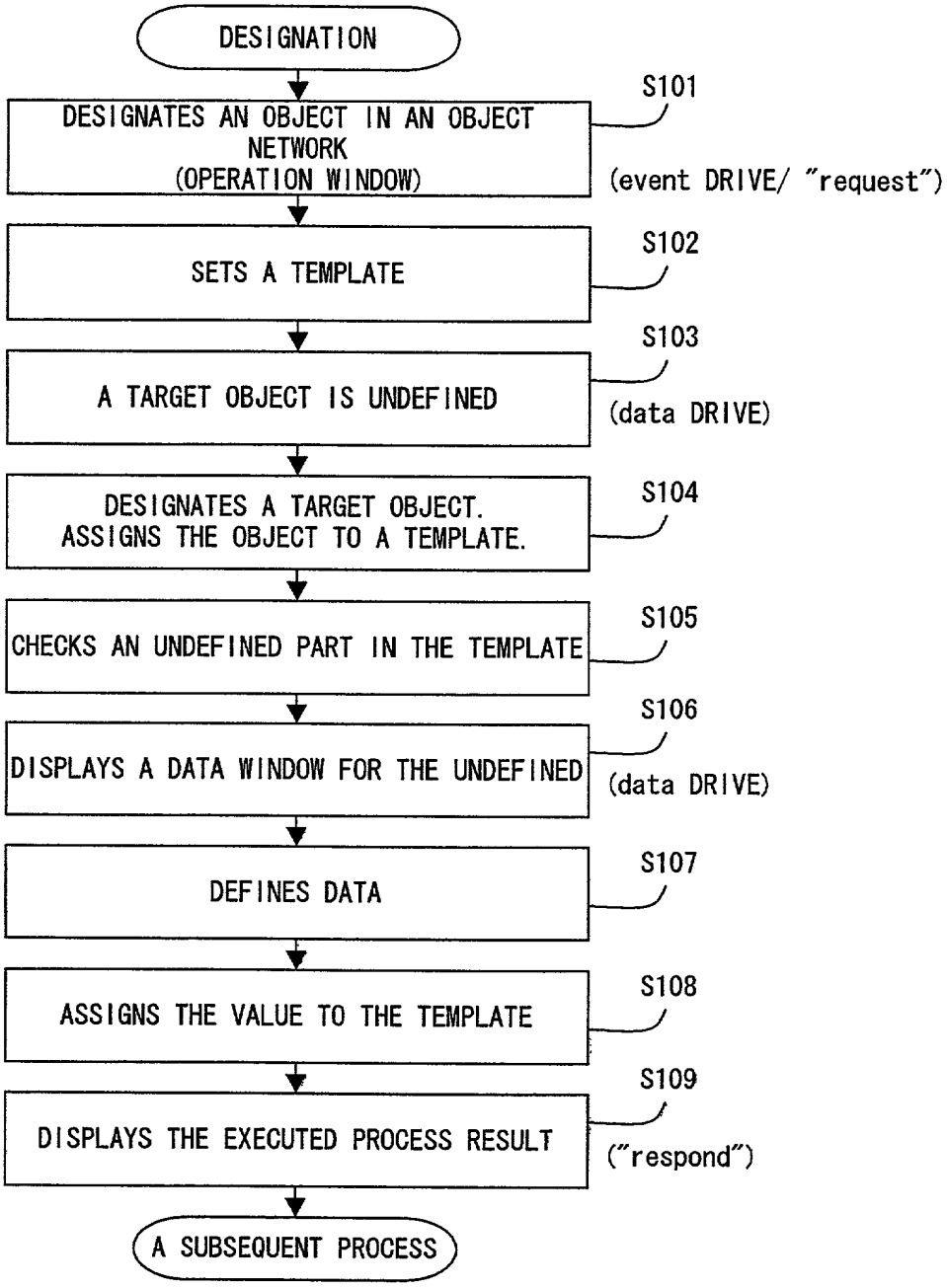

DESIGNATION
DESIGNATES AN OBJECT IN AN OBJECT NETWORK (OPERATION WINDOW)
S101
(event DRIVE/ "request")
SETS A TEMPLATE
S102
A TARGET OBJECT IS UNDEFINED
S103
(data DRIVE)
DESIGNATES A TARGET OBJECT. ASSIGNS THE OBJECT TO A TEMPLATE.
S104
CHECKS AN UNDEFINED PART IN THE TEMPLATE
S105
DISPLAYS A DATA WINDOW FOR THE UNDEFINED
S106
(data DRIVE)
DEFINES DATA
S107
ASSIGNS THE VALUE TO THE TEMPLATE
S108
DISPLAYS THE EXECUTED PROCESS RESULT
S109
("respond")
A SUBSEQUENT PROCESS

FIG. 19

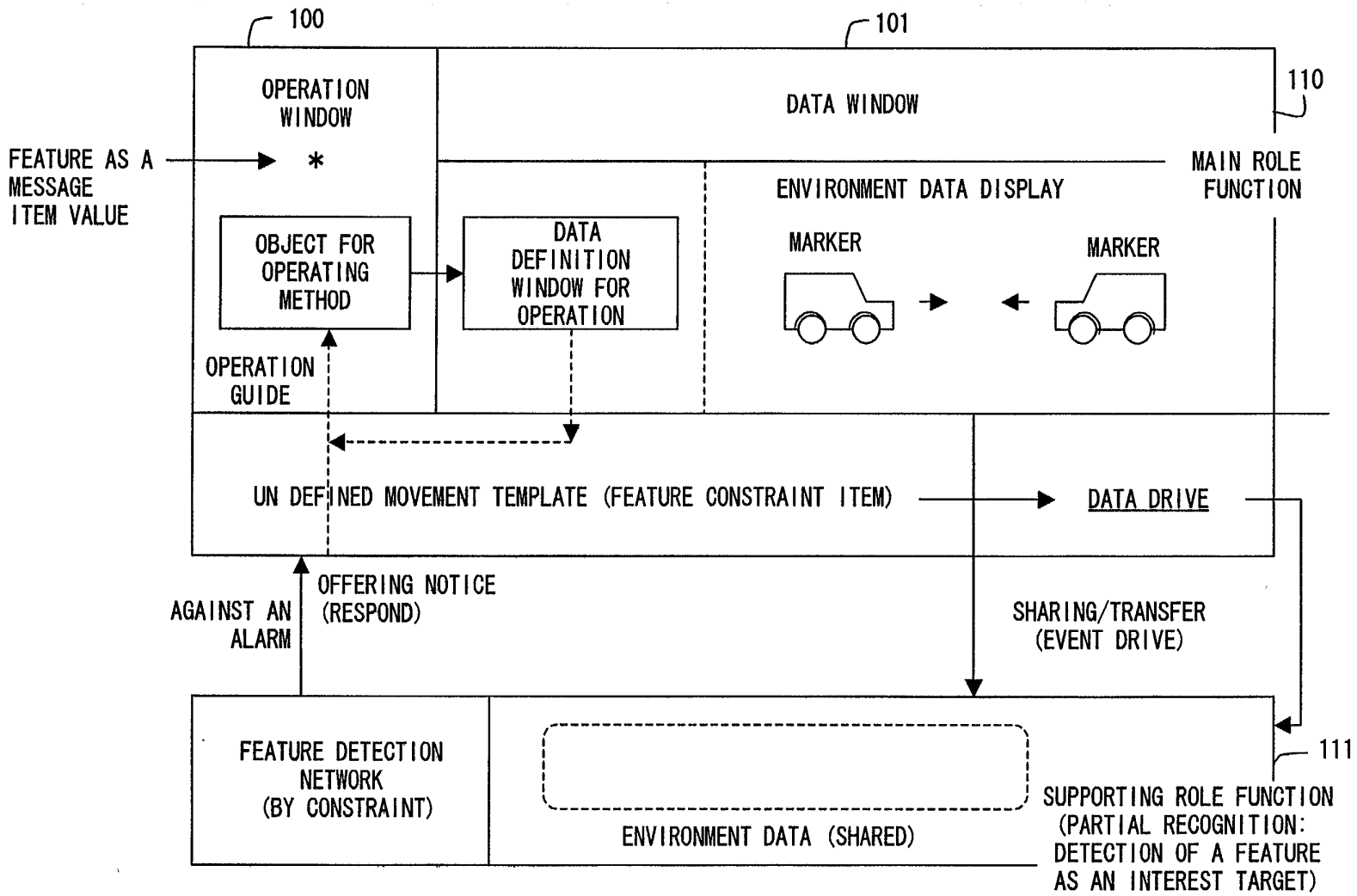

100
101
OPERATION WINDOW
DATA WINDOW
110
FEATURE AS A MESSAGE ITEM VALUE
*
MAIN ROLE FUNCTION
ENVIRONMENT DATA DISPLAY
OBJECT FOR OPERATING METHOD
DATA DEFINITION WINDOW FOR OPERATION
MARKER
MARKER
OPERATION GUIDE
UN DEFINED MOVEMENT TEMPLATE (FEATURE CONSTRAINT ITEM)
DATA DRIVE
AGAINST AN ALARM
OFFERING NOTICE (RESPOND)
SHARING/TRANSFER (EVENT DRIVE)
FEATURE DETECTION NETWORK (BY CONSTRAINT)
ENVIRONMENT DATA (SHARED)
111
SUPPORTING ROLE FUNCTION (PARTIAL RECOGNITION: DETECTION OF A FEATURE AS AN INTEREST TARGET)

FIG. 20

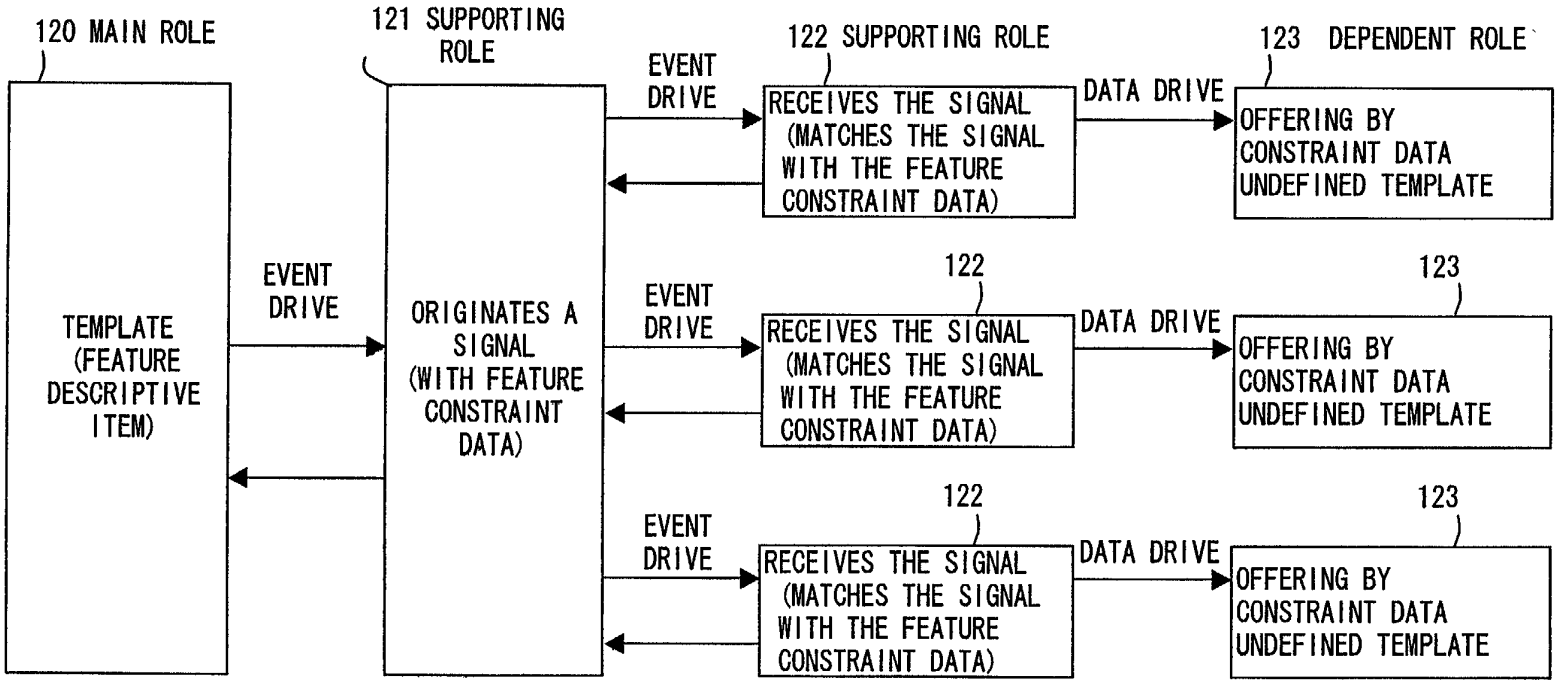

120 MAIN ROLE
121 SUPPORTING ROLE
122 SUPPORTING ROLE
123 DEPENDENT ROLE
TEMPLATE (FEATURE DESCRIPTIVE ITEM)
EVENT DRIVE
ORIGINATES A SIGNAL (WITH FEATURE CONSTRAINT DATA)
EVENT DRIVE
RECEIVES THE SIGNAL (MATCHES THE SIGNAL WITH THE FEATURE CONSTRAINT DATA)
DATA DRIVE
OFFERING BY CONSTRAINT DATA UNDEFINED TEMPLATE
122
123
EVENT DRIVE
RECEIVES THE SIGNAL (MATCHES THE SIGNAL WITH THE FEATURE CONSTRAINT DATA)
DATA DRIVE
OFFERING BY CONSTRAINT DATA UNDEFINED TEMPLATE
122
123
EVENT DRIVE
RECEIVES THE SIGNAL (MATCHES THE SIGNAL WITH THE FEATURE CONSTRAINT DATA)
DATA DRIVE
OFFERING BY CONSTRAINT DATA UNDEFINED TEMPLATE

FIG. 21

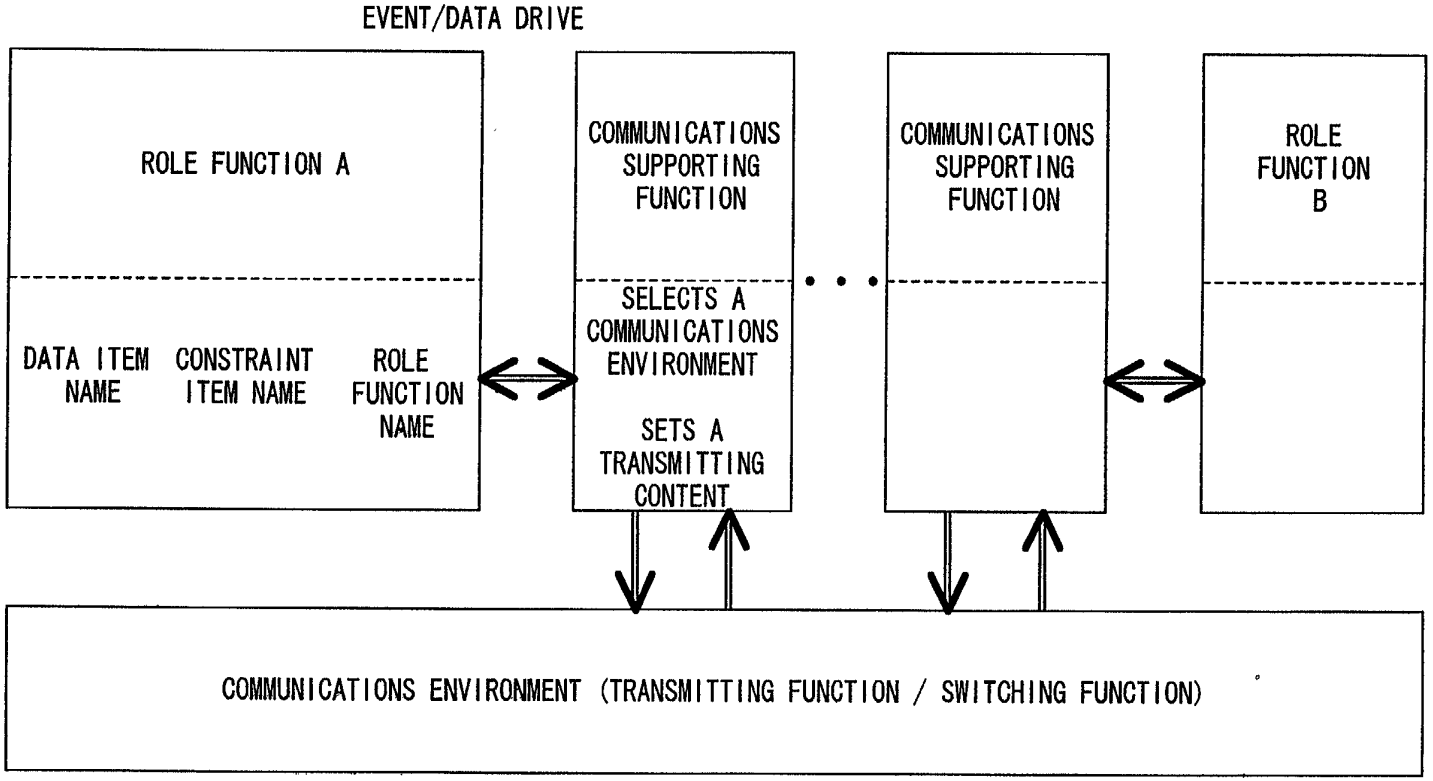

EVENT/DATA DRIVE
ROLE FUNCTION A
DATA ITEM NAME
CONSTRAINT ITEM NAME
ROLE FUNCTION NAME
COMMUNICATIONS SUPPORTING FUNCTION
SELECTS A COMMUNICATIONS ENVIRONMENT
SETS A TRANSMITTING CONTENT
COMMUNICATIONS SUPPORTING FUNCTION
ROLE FUNCTION B
COMMUNICATIONS ENVIRONMENT (TRANSMITTING FUNCTION / SWITCHING FUNCTION)

FIG. 22

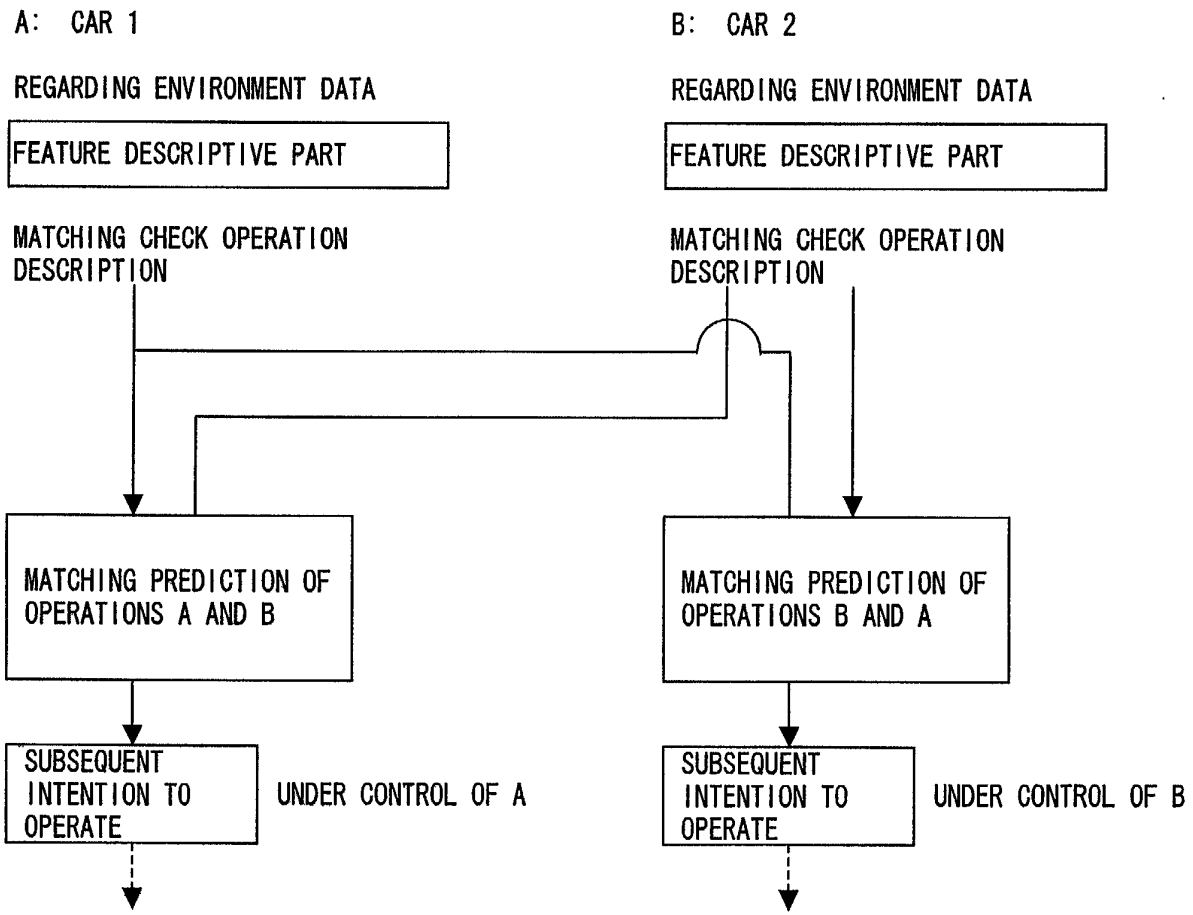

A: CAR 1
REGARDING ENVIRONMENT DATA
FEATURE DESCRIPTIVE PART
MATCHING CHECK OPERATION DESCRIPTION
MATCHING PREDICTION OF OPERATIONS A AND B
SUBSEQUENT INTENTION TO OPERATE
UNDER CONTROL OF A
B: CAR 2
REGARDING ENVIRONMENT DATA
FEATURE DESCRIPTIVE PART
MATCHING CHECK OPERATION DESCRIPTION
MATCHING PREDICTION OF OPERATIONS B AND A
SUBSEQUENT INTENTION TO OPERATE
UNDER CONTROL OF B

FIG. 23

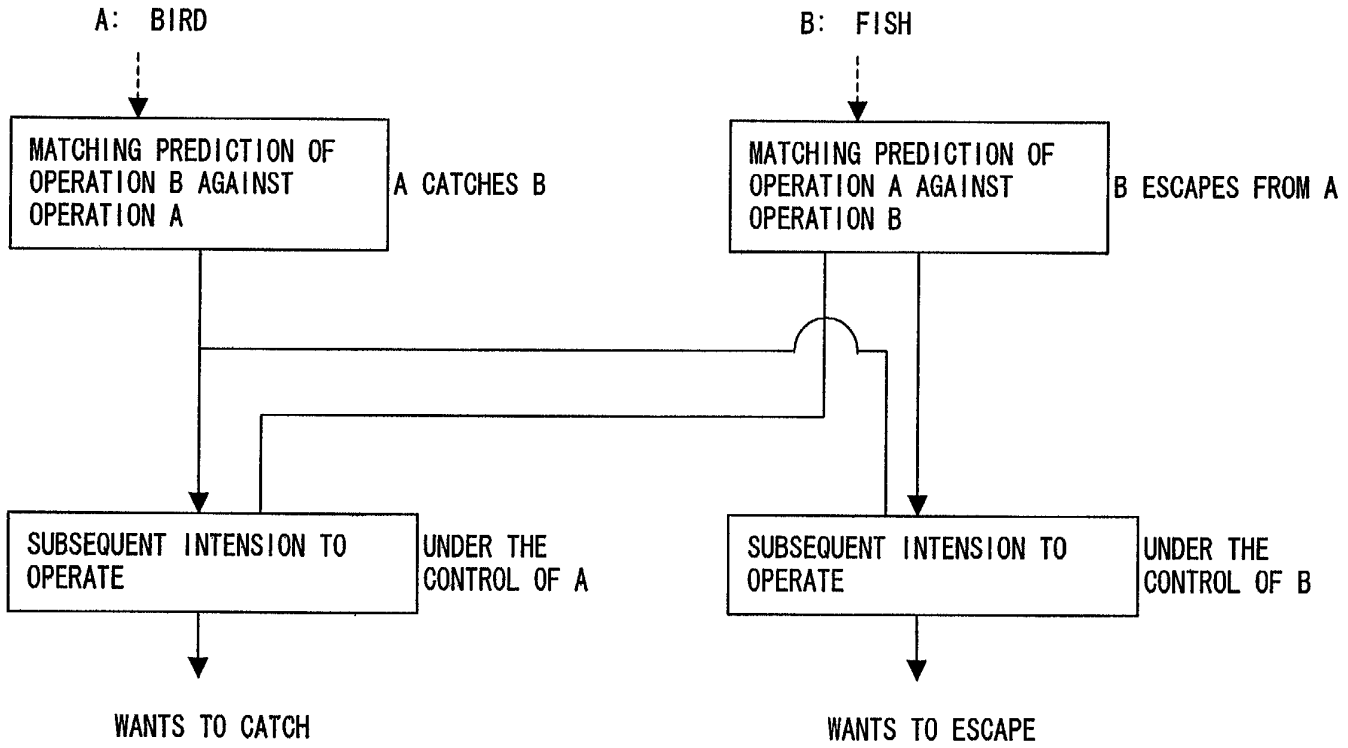

A: BIRD
B: FISH
MATCHING PREDICTION OF OPERATION B AGAINST OPERATION A
A CATCHES B
MATCHING PREDICTION OF OPERATION A AGAINST OPERATION B
B ESCAPES FROM A
SUBSEQUENT INTENSION TO OPERATE
UNDER THE CONTROL OF A
SUBSEQUENT INTENSION TO OPERATE
UNDER THE CONTROL OF B
WANTS TO CATCH
WANTS TO ESCAPE

FIG. 24

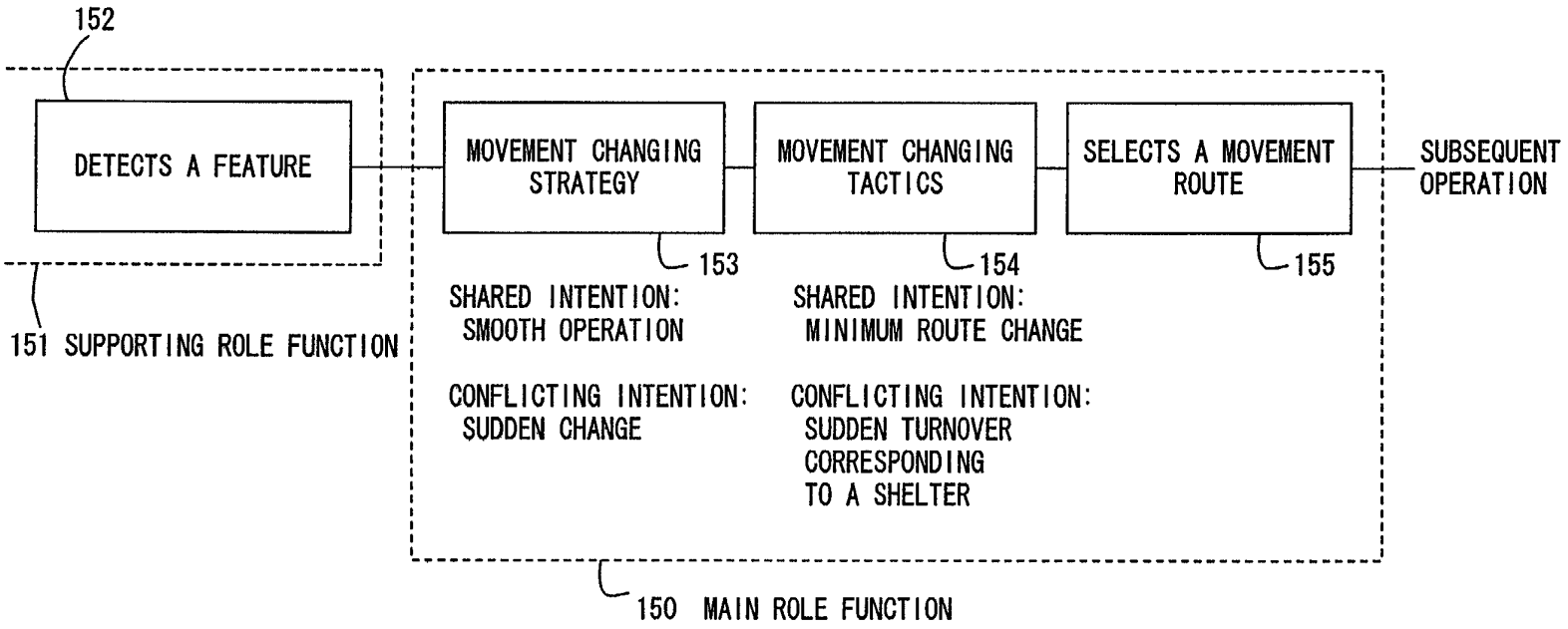

152
DETECTS A FEATURE
151 SUPPORTING ROLE FUNCTION
MOVEMENT CHANGING STRATEGY
153
SHARED INTENTION: SMOOTH OPERATION
CONFLICTING INTENTION: SUDDEN CHANGE
MOVEMENT CHANGING TACTICS
154
SHARED INTENTION: MINIMUM ROUTE CHANGE
CONFLICTING INTENTION: SUDDEN TURNOVER CORRESPONDING TO A SHELTER
SELECTS A MOVEMENT ROUTE
155
SUBSEQUENT OPERATION
150 MAIN ROLE FUNCTION

FIG. 25

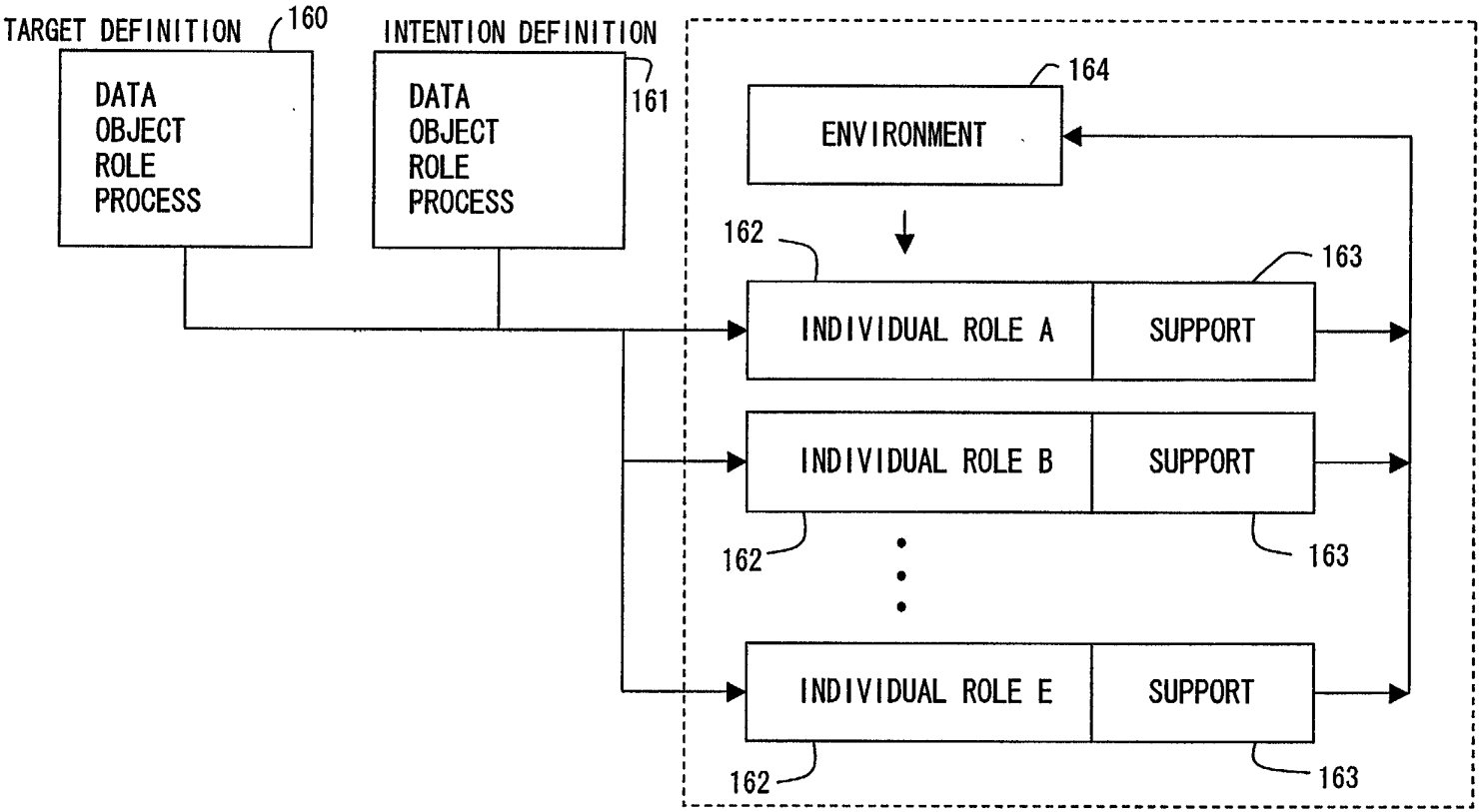

TARGET DEFINITION
160
DATA
OBJECT
ROLE
PROCESS
INTENTION DEFINITION
161
DATA
OBJECT
ROLE
PROCESS
164
ENVIRONMENT
162
163
INDIVIDUAL ROLE A
SUPPORT
INDIVIDUAL ROLE B
SUPPORT
162
163
INDIVIDUAL ROLE E
SUPPORT
162
163

FIG. 26

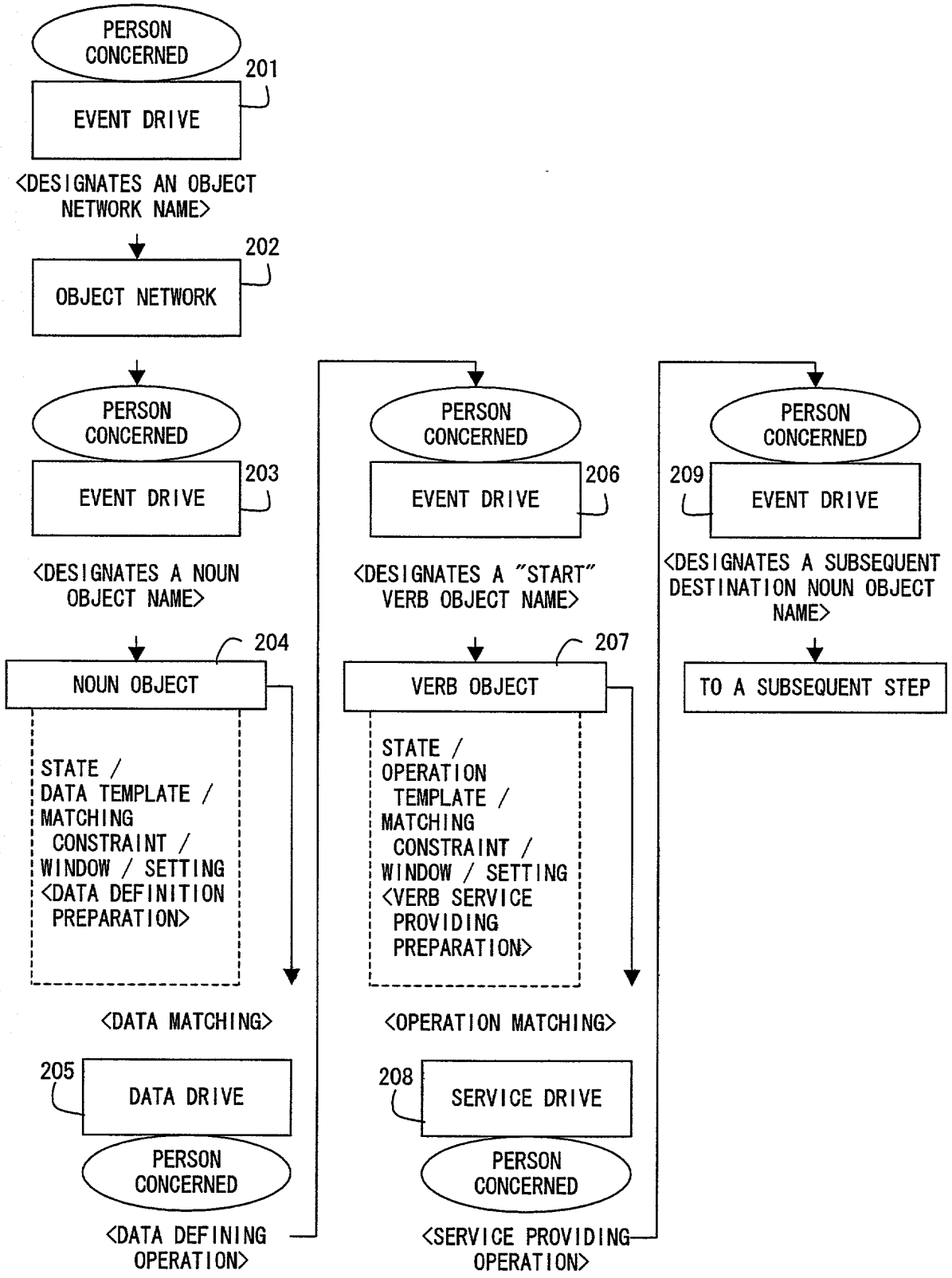

PERSON CONCERNED
201
EVENT DRIVE
<DESIGNATES AN OBJECT NETWORK NAME>
202
OBJECT NETWORK
PERSON CONCERNED
203
EVENT DRIVE
<DESIGNATES A NOUN OBJECT NAME>
204
NOUN OBJECT
STATE / DATA TEMPLATE / MATCHING CONSTRAINT / WINDOW / SETTING <DATA DEFINITION PREPARATION>
<DATA MATCHING>
205
DATA DRIVE
PERSON CONCERNED
<DATA DEFINING OPERATION>
PERSON CONCERNED
206
EVENT DRIVE
<DESIGNATES A "START" VERB OBJECT NAME>
207
VERB OBJECT
STATE / OPERATION TEMPLATE / MATCHING CONSTRAINT / WINDOW / SETTING <VERB SERVICE PROVIDING PREPARATION>
<OPERATION MATCHING>
208
SERVICE DRIVE
PERSON CONCERNED
<SERVICE PROVIDING OPERATION>
PERSON CONCERNED
209
EVENT DRIVE
<DESIGNATES A SUBSEQUENT DESTINATION NOUN OBJECT NAME>
TO A SUBSEQUENT STEP

FIG. 27

JP2005-050246A

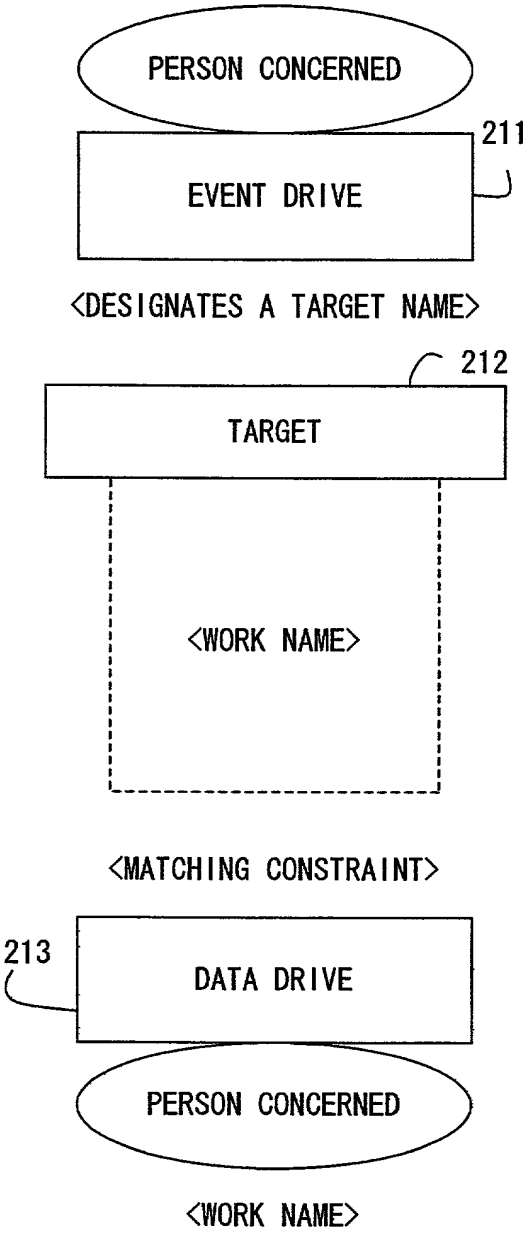


FIG. 28

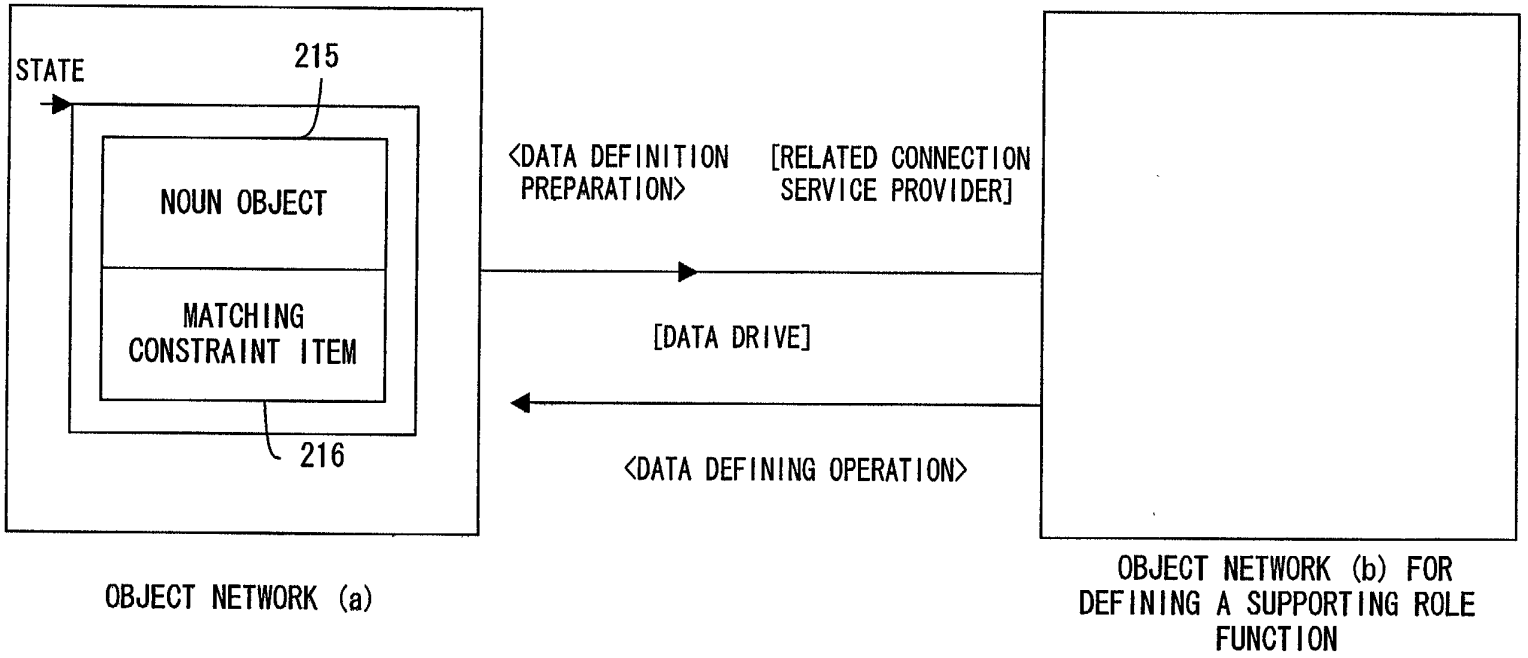

STATE
215
NOUN OBJECT
MATCHING CONSTRAINT ITEM
216
<DATA DEFINITION PREPARATION>
[RELATED CONNECTION SERVICE PROVIDER]
[DATA DRIVE]
<DATA DEFINING OPERATION>
OBJECT NETWORK (a)
OBJECT NETWORK (b) FOR DEFINING A SUPPORTING ROLE FUNCTION

FIG. 29

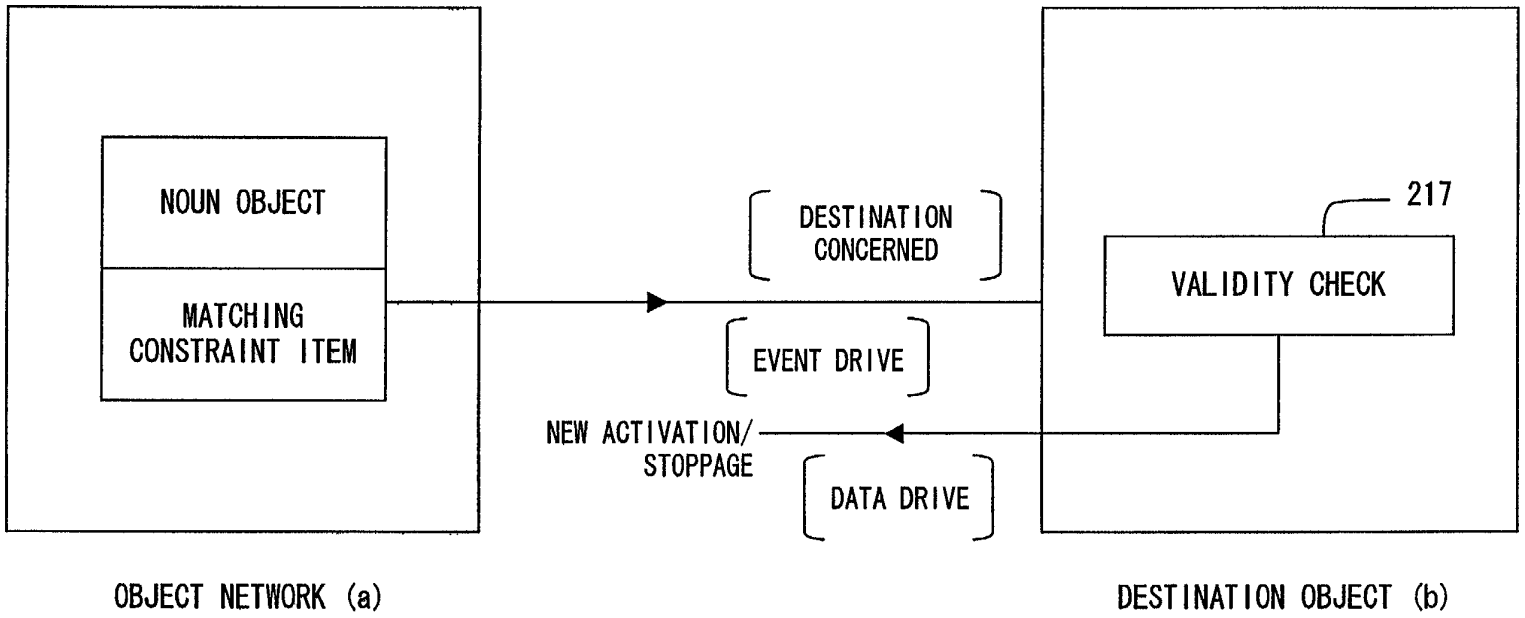

NOUN OBJECT
MATCHING CONSTRAINT ITEM
DESTINATION CONCERNED
EVENT DRIVE
NEW ACTIVATION/ STOPPAGE
DATA DRIVE
217
VALIDITY CHECK
OBJECT NETWORK (a)
DESTINATION OBJECT (b)

FIG. 30

TOSHIBA 03C19660

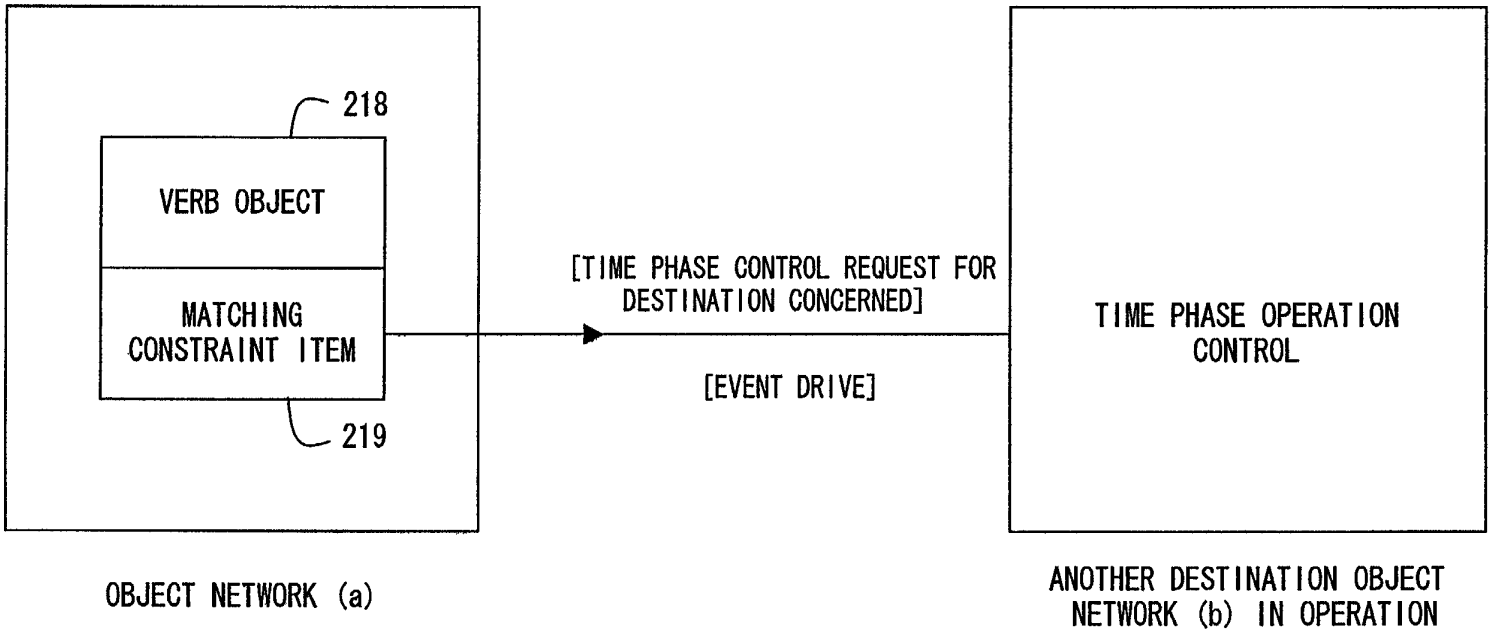


FIG. 31

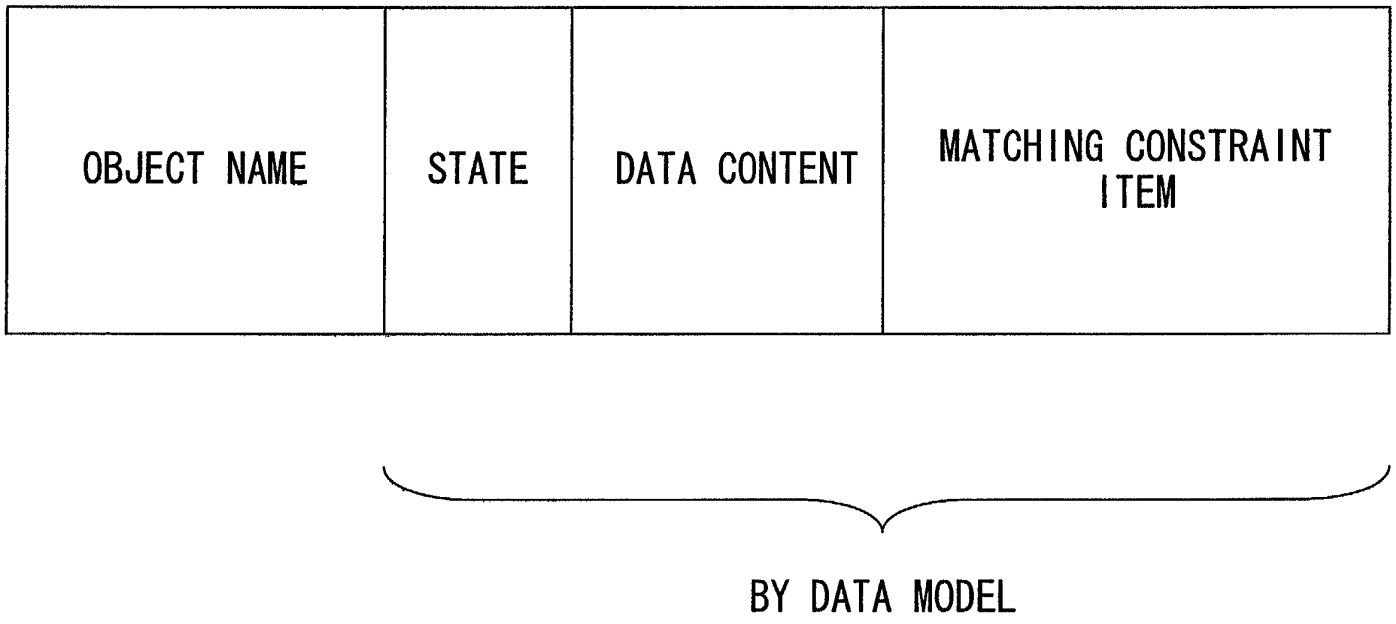

OBJECT NAME
STATE
DATA CONTENT
MATCHING CONSTRAINT ITEM
BY DATA MODEL

FIG. 32

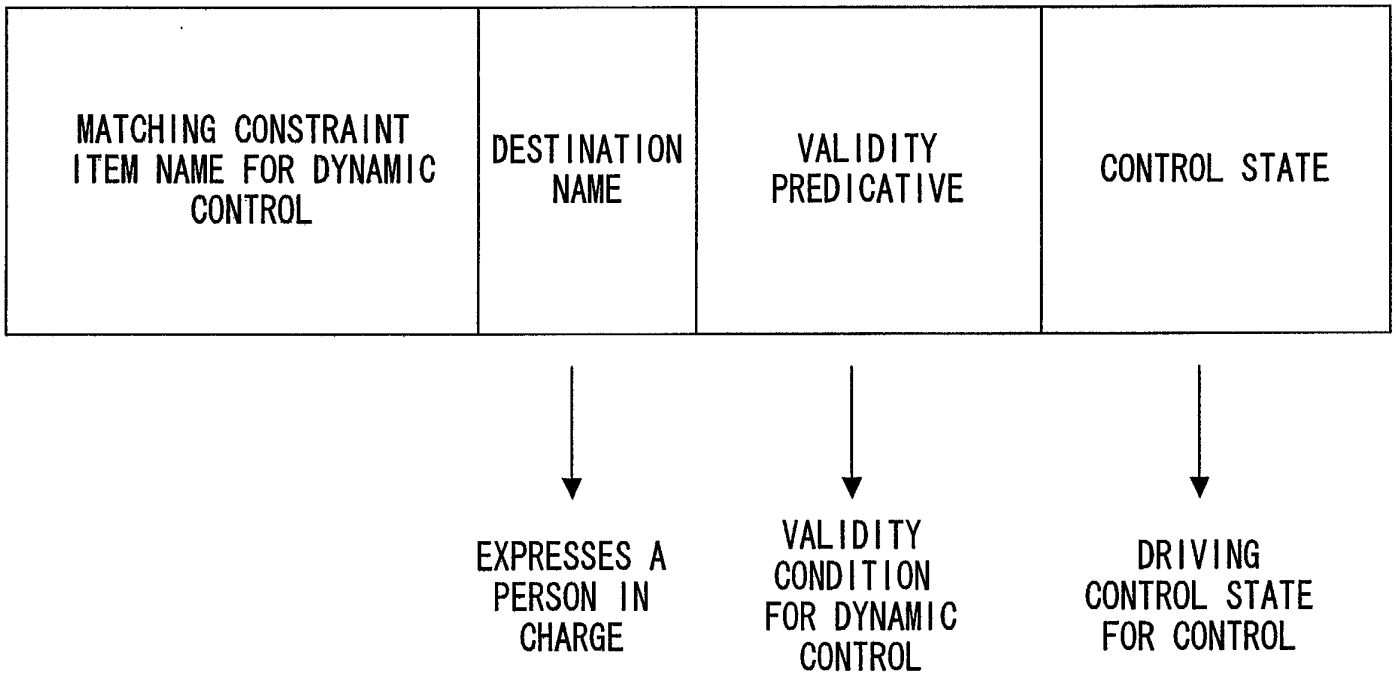

MATCHING CONSTRAINT ITEM NAME FOR DYNAMIC CONTROL
DESTINATION NAME
VALIDITY PREDICATIVE
CONTROL STATE
EXPRESSES A PERSON IN CHARGE
VALIDITY CONDITION FOR DYNAMIC CONTROL
DRIVING CONTROL STATE FOR CONTROL

FIG. 33

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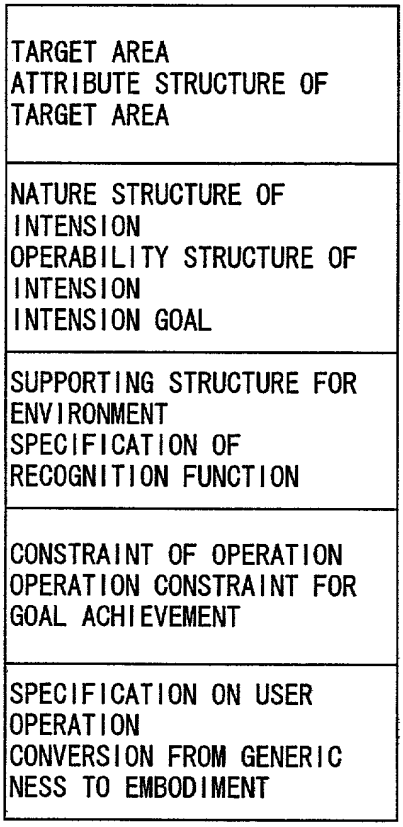

TARGET AREA: RESTRICTS A RELATIONSHIP WITH A PERSON CONCERNED.
(ACCESS RIGHT) → DESCRIBES THE ATTRIBUTE STRUCTURE OF A TARGET.

INTENSION: INTENSION DEFINITION PREPARING PROCESS FOR AN INTENSION ACCOMPLISHMENT SUPPORTING FUNCTION (TEMPLATE SETTING)

SUPPORT: FEATURE STRUCTURE OF ENVIRONMENT DATA

STRATEGY/TACTICS: DESCRIBES OPERABILITY

FIG. 34

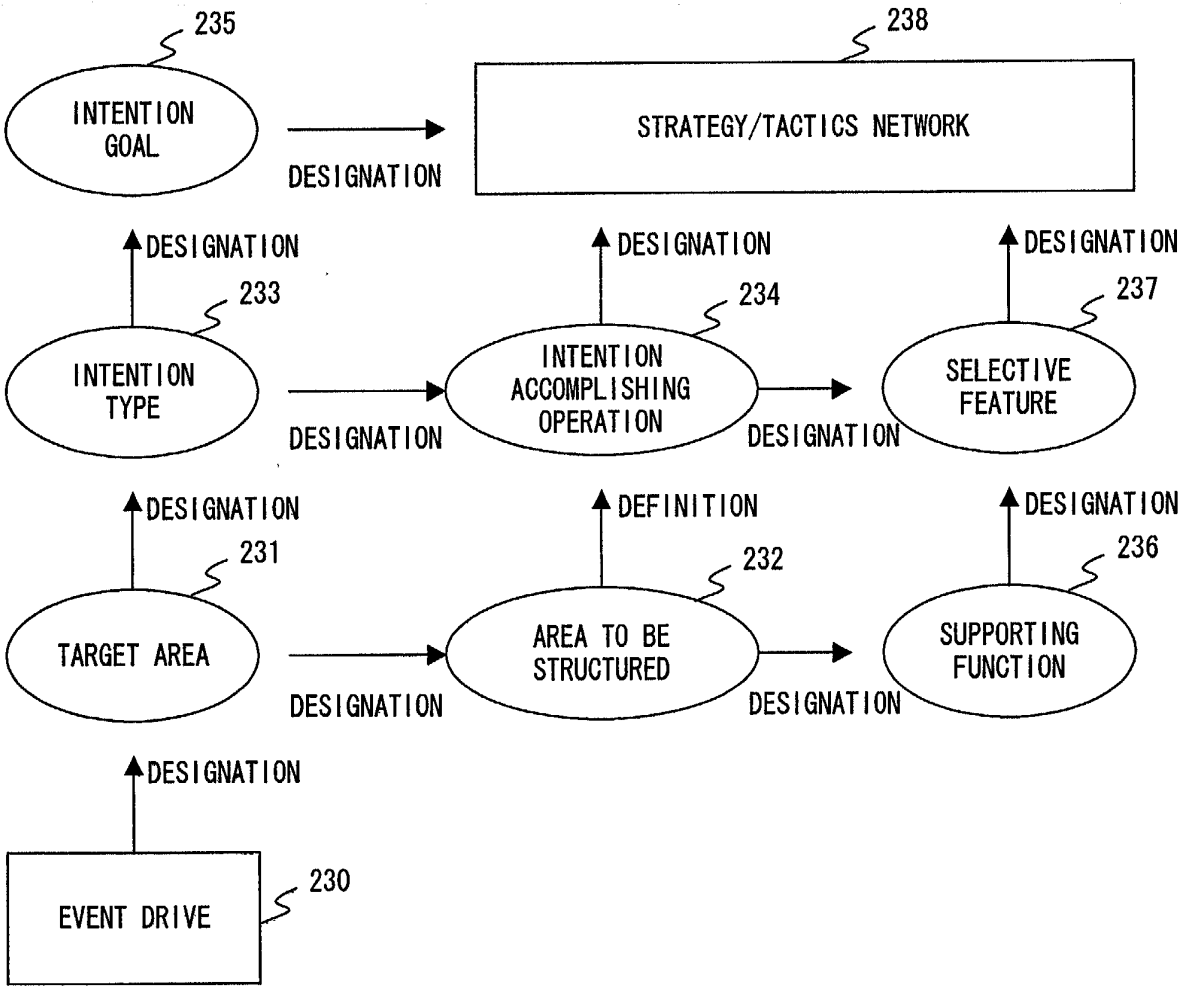
235
INTENTION GOAL
DESIGNATION
238
STRATEGY/TACTICS NETWORK
DESIGNATION
233
INTENTION TYPE
DESIGNATION
DESIGNATION
234
INTENTION ACCOMPLISHING OPERATION
DESIGNATION
DESIGNATION
237
SELECTIVE FEATURE
DESIGNATION
231
TARGET AREA
DESIGNATION
DEFINITION
232
AREA TO BE STRUCTURED
DESIGNATION
DESIGNATION
236
SUPPORTING FUNCTION
DESIGNATION
230
EVENT DRIVE

FIG. 35

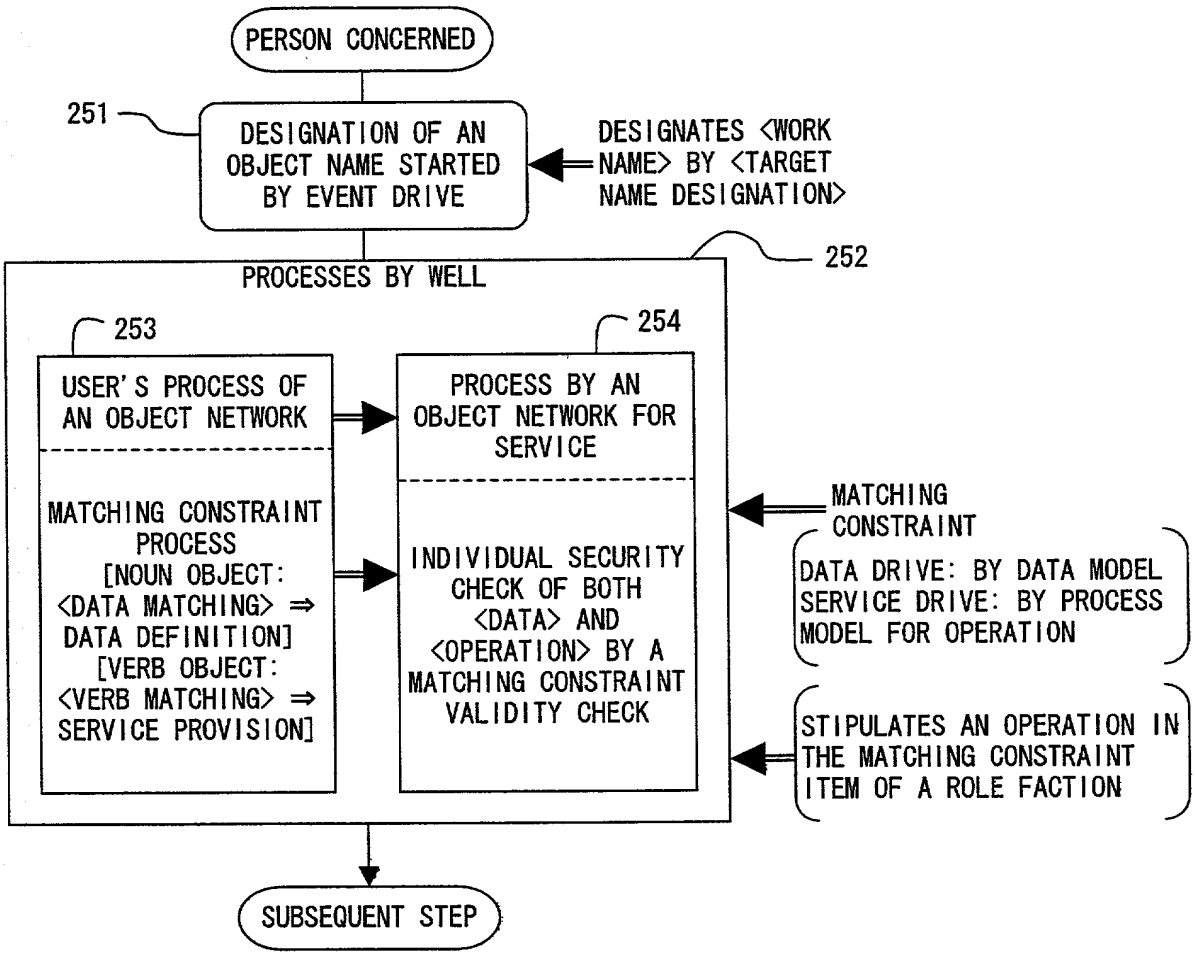
PERSON CONCERNED
251
DESIGNATION OF AN OBJECT NAME STARTED BY EVENT DRIVE
DESIGNATES <WORK NAME> BY <TARGET NAME DESIGNATION>
252
PROCESSES BY WELL
253
254
USER'S PROCESS OF AN OBJECT NETWORK
MATCHING CONSTRAINT PROCESS [NOUN OBJECT: <DATA MATCHING> ⇒ DATA DEFINITION] [VERB OBJECT: <VERB MATCHING> ⇒ SERVICE PROVISION]
PROCESS BY AN OBJECT NETWORK FOR SERVICE
INDIVIDUAL SECURITY CHECK OF BOTH <DATA> AND <OPERATION> BY A MATCHING CONSTRAINT VALIDITY CHECK
MATCHING CONSTRAINT
DATA DRIVE: BY DATA MODEL
SERVICE DRIVE: BY PROCESS MODEL FOR OPERATION
STIPULATES AN OPERATION IN THE MATCHING CONSTRAINT ITEM OF A ROLE FACTION
SUBSEQUENT STEP

FIG. 36

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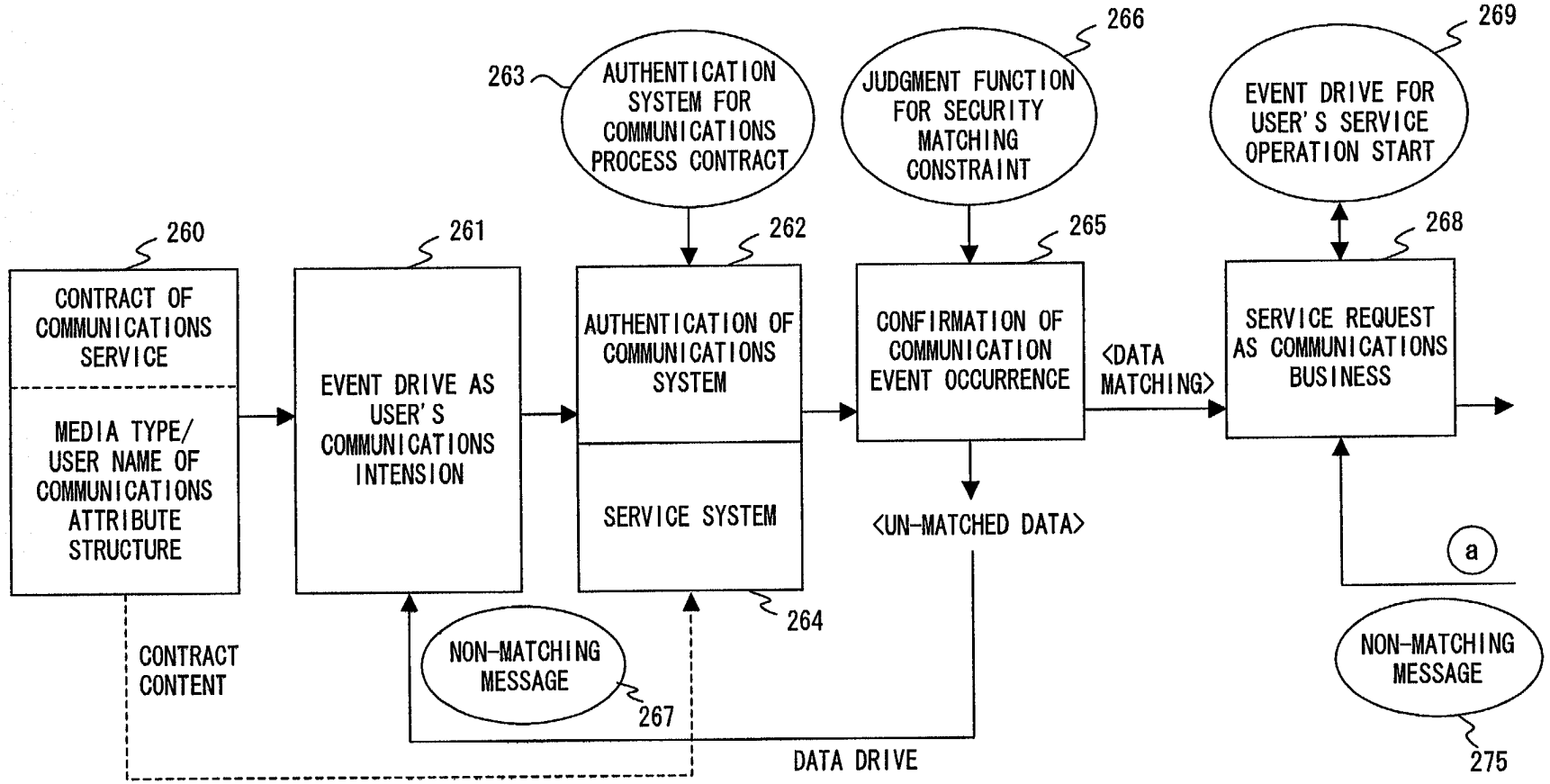

FIG. 37

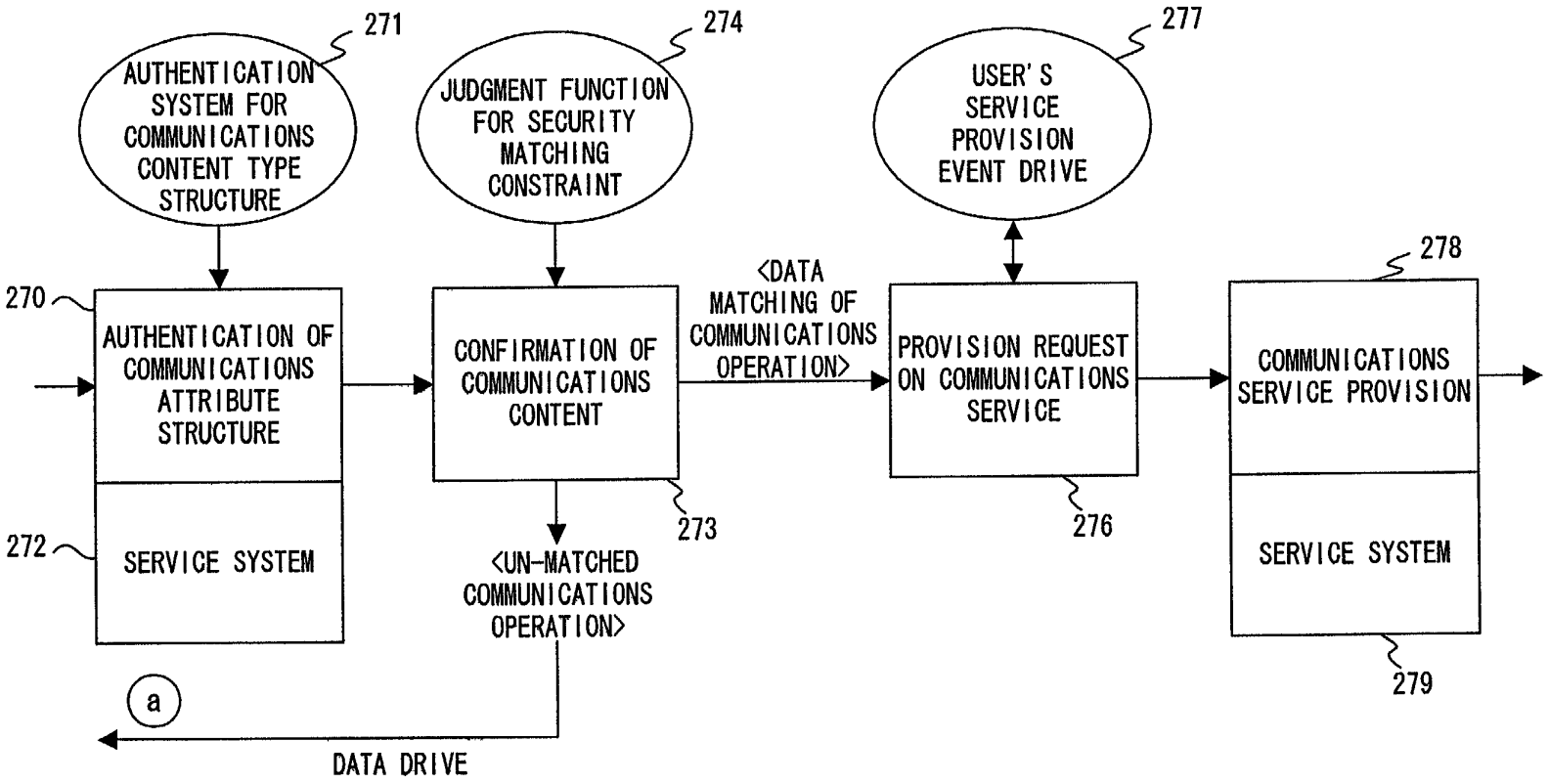
271
AUTHENTICATION SYSTEM FOR COMMUNICATIONS CONTENT TYPE STRUCTURE
274
JUDGMENT FUNCTION FOR SECURITY MATCHING CONSTRAINT
277
USER'S SERVICE PROVISION EVENT DRIVE
278
270
AUTHENTICATION OF COMMUNICATIONS ATTRIBUTE STRUCTURE
CONFIRMATION OF COMMUNICATIONS CONTENT
<DATA MATCHING OF COMMUNICATIONS OPERATION>
PROVISION REQUEST ON COMMUNICATIONS SERVICE
COMMUNICATIONS SERVICE PROVISION
272
SERVICE SYSTEM
273
276
SERVICE SYSTEM
279
<UN-MATCHED COMMUNICATIONS OPERATION>
a
DATA DRIVE

FIG. 38

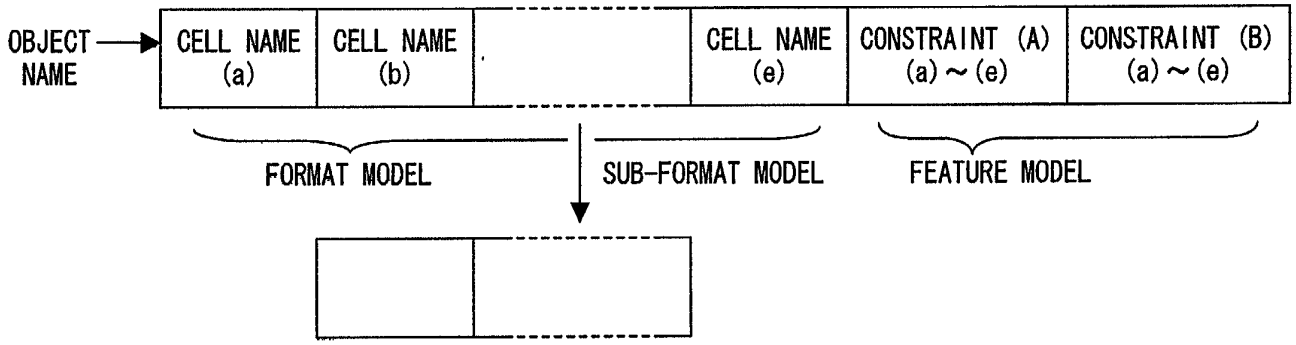
OBJECT NAME
CELL NAME (a)
CELL NAME (b)
CELL NAME (e)
CONSTRAINT (A) (a)～(e)
CONSTRAINT (B) (a)～(e)
FORMAT MODEL
SUB-FORMAT MODEL
FEATURE MODEL

FIG. 39

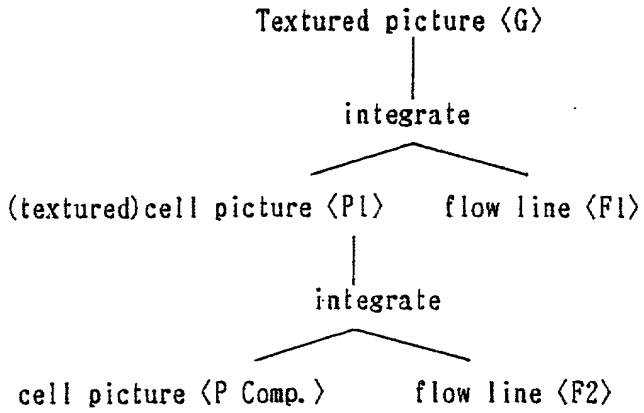
Textured picture 〈G〉
integrate
(textured)cell picture 〈P1〉
flow line 〈F1〉
integrate
cell picture 〈P Comp.〉
flow line 〈F2〉

FIG. 40

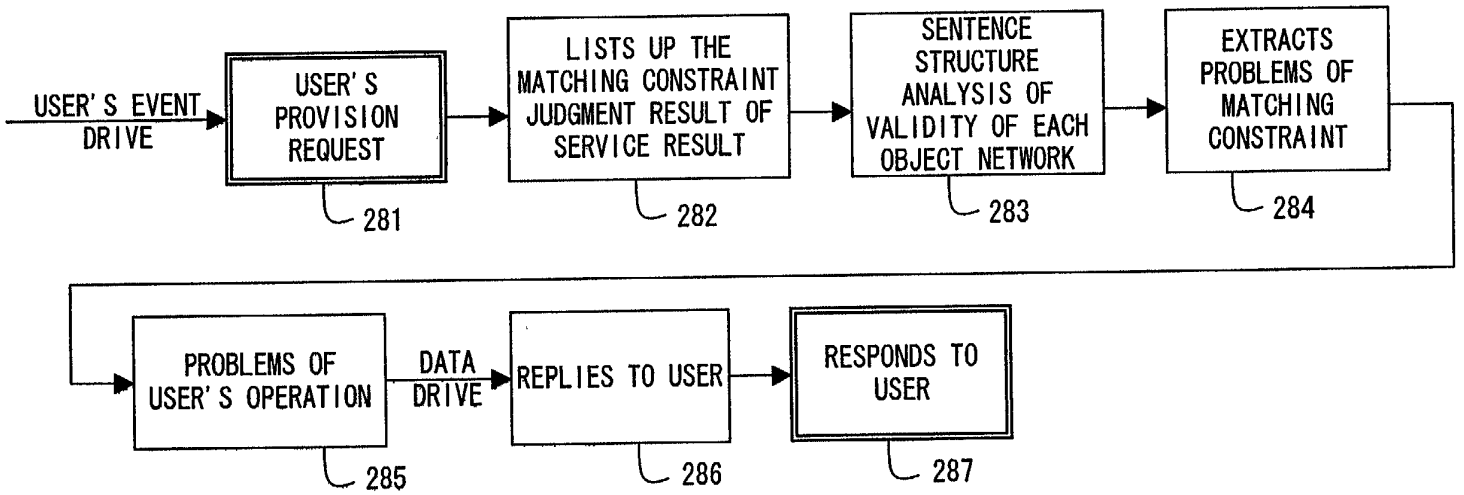
USER'S EVENT DRIVE
USER'S PROVISION REQUEST
281
LISTS UP THE MATCHING CONSTRAINT JUDGMENT RESULT OF SERVICE RESULT
282
SENTENCE STRUCTURE ANALYSIS OF VALIDITY OF EACH OBJECT NETWORK
283
EXTRACTS PROBLEMS OF MATCHING CONSTRAINT
284
PROBLEMS OF USER'S OPERATION
285
DATA DRIVE
REPLIES TO USER
286
RESPONDS TO USER
287

FIG. 41

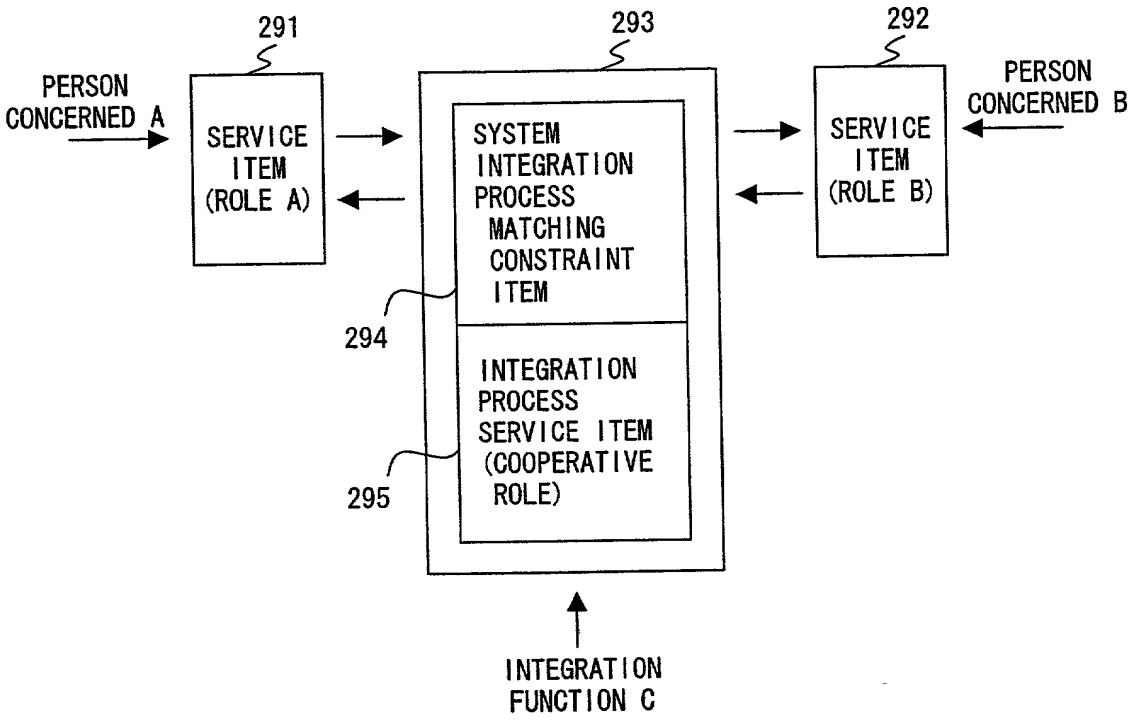
291
293
292
PERSON CONCERNED A
SERVICE ITEM (ROLE A)
SYSTEM INTEGRATION PROCESS MATCHING CONSTRAINT ITEM
294
INTEGRATION PROCESS SERVICE ITEM (COOPERATIVE ROLE)
295
SERVICE ITEM (ROLE B)
PERSON CONCERNED B
INTEGRATION FUNCTION C

FIG. 42

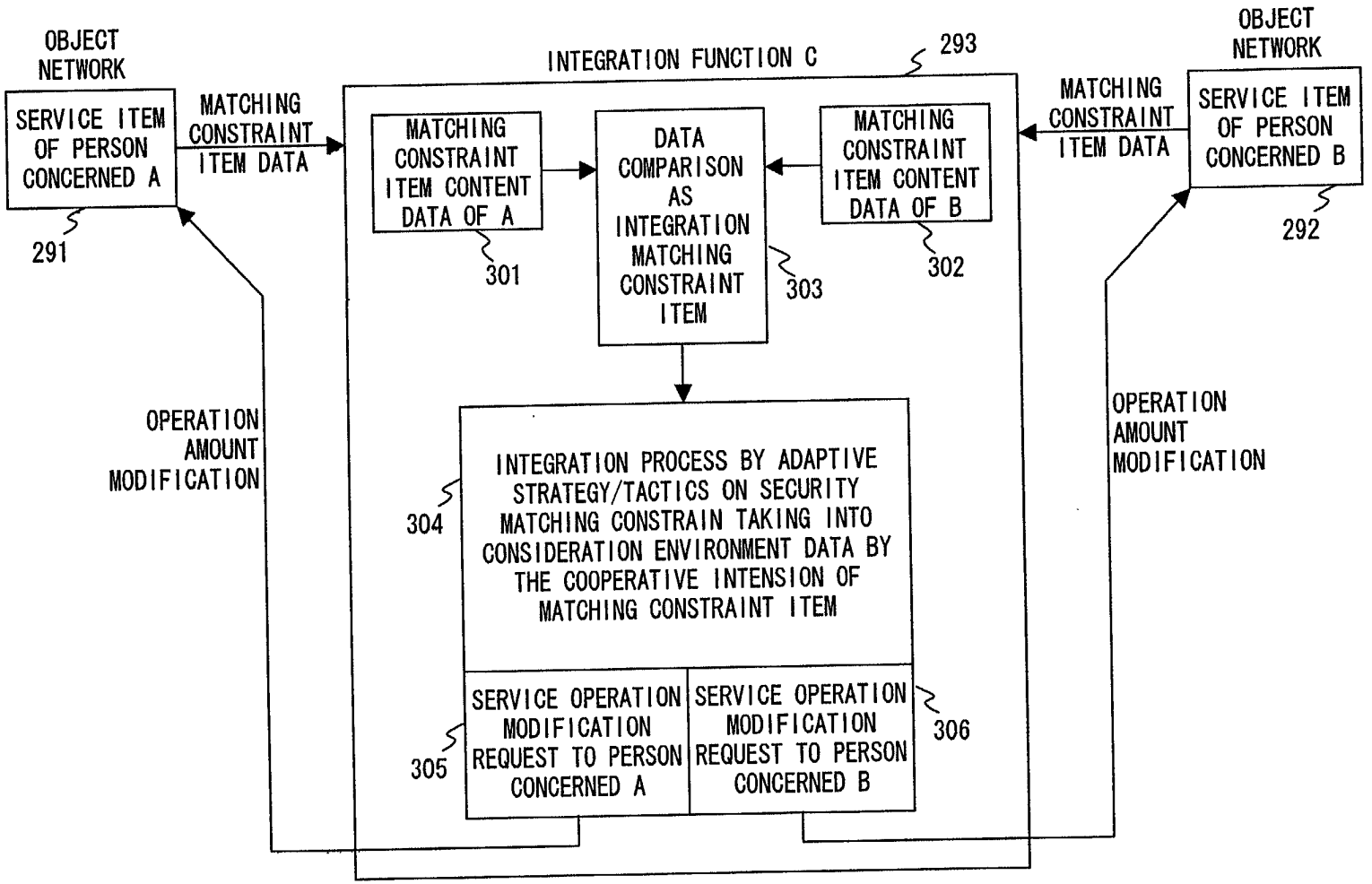
OBJECT NETWORK
SERVICE ITEM OF PERSON CONCERNED A
291
MATCHING CONSTRAINT ITEM DATA
INTEGRATION FUNCTION C
293
MATCHING CONSTRAINT ITEM CONTENT DATA OF A
301
DATA COMPARISON AS INTEGRATION MATCHING CONSTRAINT ITEM
303
MATCHING CONSTRAINT ITEM CONTENT DATA OF B
302
MATCHING CONSTRAINT ITEM DATA
OBJECT NETWORK
SERVICE ITEM OF PERSON CONCERNED B
292
OPERATION AMOUNT MODIFICATION
304
INTEGRATION PROCESS BY ADAPTIVE STRATEGY/TACTICS ON SECURITY MATCHING CONSTRAIN TAKING INTO CONSIDERATION ENVIRONMENT DATA BY THE COOPERATIVE INTENSION OF MATCHING CONSTRAINT ITEM
305
SERVICE OPERATION MODIFICATION REQUEST TO PERSON CONCERNED A
SERVICE OPERATION MODIFICATION REQUEST TO PERSON CONCERNED B
306
OPERATION AMOUNT MODIFICATION

FIG. 43

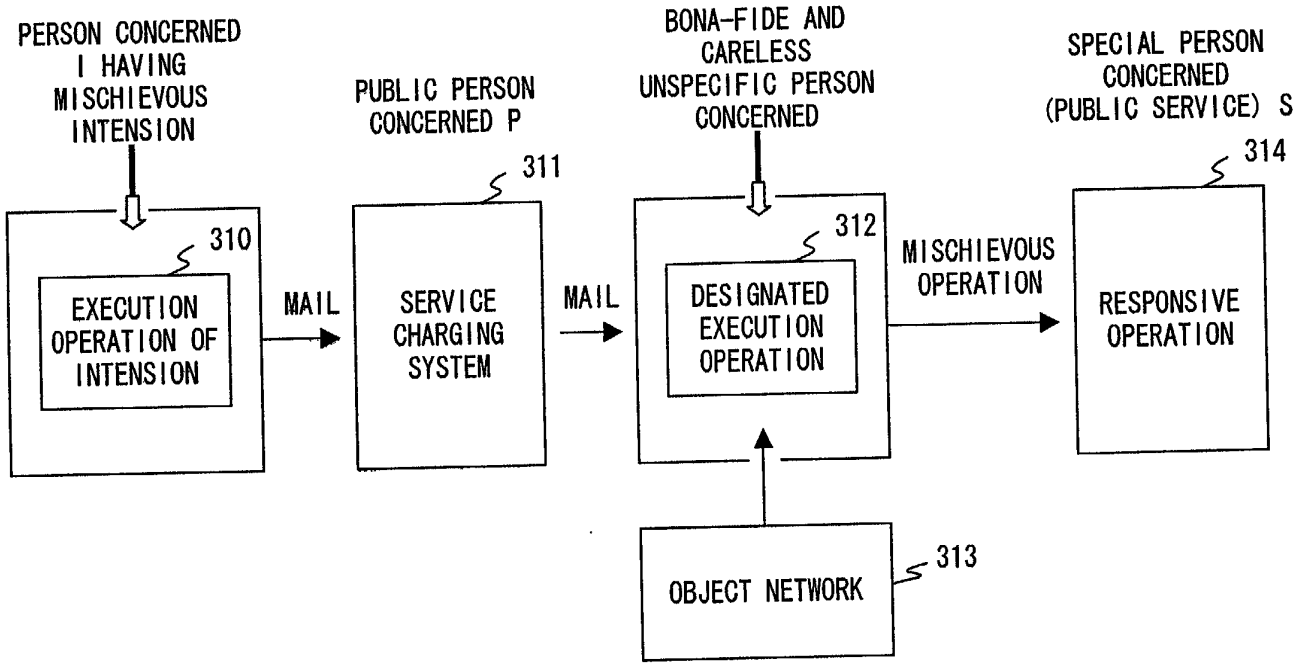
PERSON CONCERNED I HAVING MISCHIEVOUS INTENSION
310
EXECUTION OPERATION OF INTENSION
MAIL
PUBLIC PERSON CONCERNED P
311
SERVICE CHARGING SYSTEM
MAIL
BONA-FIDE AND CARELESS UNSPECIFIC PERSON CONCERNED
312
DESIGNATED EXECUTION OPERATION
MISCHIEVOUS OPERATION
SPECIAL PERSON CONCERNED (PUBLIC SERVICE) S
314
RESPONSIVE OPERATION
OBJECT NETWORK
313

FIG. 44

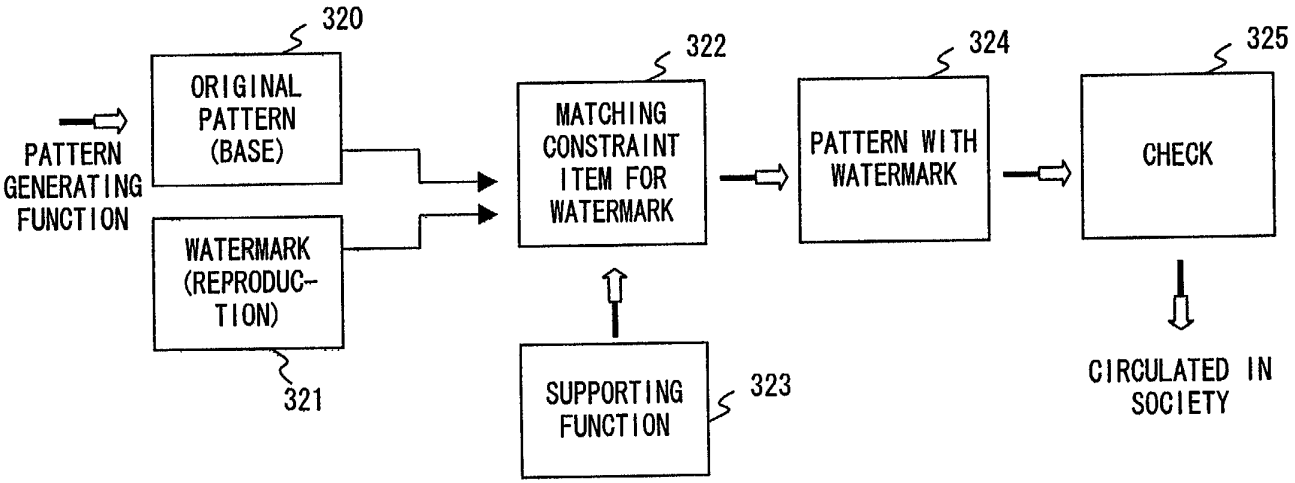
320
ORIGINAL PATTERN (BASE)
PATTERN GENERATING FUNCTION
WATERMARK (REPRODUC-TION)
321
322
MATCHING CONSTRAINT ITEM FOR WATERMARK
SUPPORTING FUNCTION
323
324
PATTERN WITH WATERMARK
325
CHECK
CIRCULATED IN SOCIETY

FIG. 45

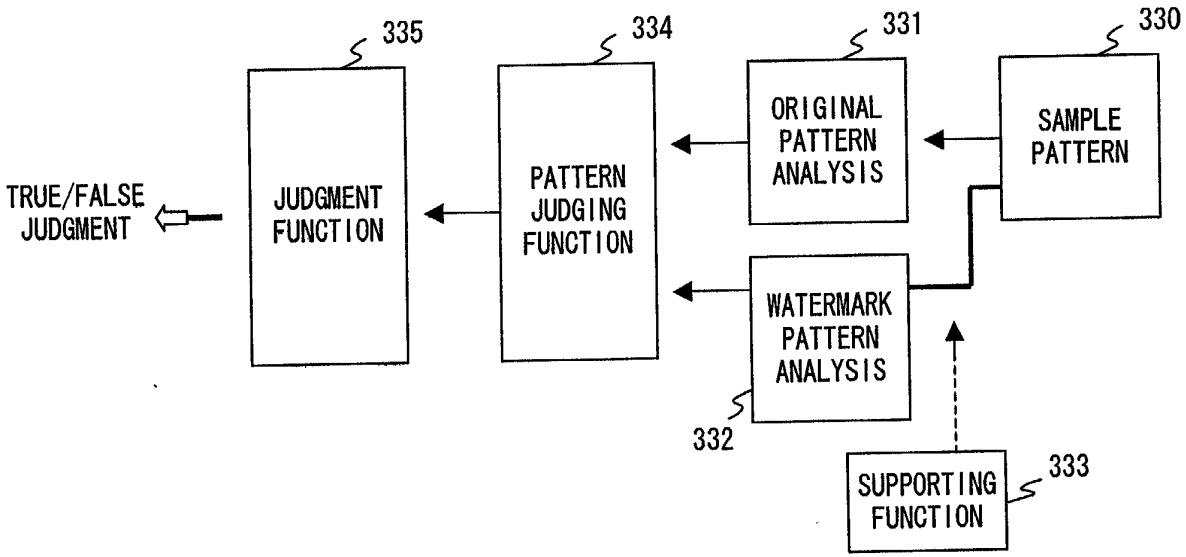
335
334
331
330
TRUE/FALSE JUDGMENT
JUDGMENT FUNCTION
PATTERN JUDGING FUNCTION
ORIGINAL PATTERN ANALYSIS
SAMPLE PATTERN
WATERMARK PATTERN ANALYSIS
332
SUPPORTING FUNCTION
333

FIG. 46